

This interim report is based on the fieldwork undertaken between 15th and 18th December 2016 and 7th and 8th May 2017 and data from the survey and record. It follows the discussion and decision by Cadw on the next steps to be taken to ensure conservation of the kiln and its interpretation. A full and final report will be integrated with the findings of the watching brief by Nick Tavener of the site works which started in January 2017.

## 1. Crynodeb

Mae'r odyn 15fed/16eg ganrif yn Nhrefdraeth sydd yn cael ei gwarchod o dan lwyfan y Neuadd Coffa mewn cyflwr da o ganlyniad penderfyniad ym 1920-1 gan ymddiriedolwyr y Neuadd dan anogaeth Mortimer Wheeler, Ceidwad Archeoleg Amgueddfa Genedlaethol Cymru ar y pryd.

Gwnaeth yr ymchwiliad yn Rhagfyr 2016 darganfod fod rhan fwyaf o'r isadeiledd yr odyn yn gyflawn. Mae dyluniad yr odyn yn un o odyn tynnu i fyny syml gyda dau flwch tân gwrthwynebol ac mae'n rhagflaenydd uniongyrchol o'r odyn 19eg ganrif o'r Crochendy Ewenny sydd wedi'i ail-greu yn Amgueddfa Werin Cymru yn Sain Ffagan. Gwnaeth Cadw cynnig dyfarndal o grant ar gyfer y gwaith archeolegol ar yr heneb fel rhan o gynllun y Gronfa Loteri Treftadaeth i ddiogelu a darparu mynediad cyhoeddus i'r odyn.

## 1. Summary

The surviving 15th/16th-century kiln at Newport is preserved beneath the stage of the Memorial Hall in remarkably good condition as a result of a decision taken in 1920-1 by the hall trustees encouraged by Mortimer Wheeler, then Keeper of Archaeology at the National Museum of Wales. Investigation in December 2016 found that most of the substructure of the kiln is intact. The kiln is a simple updraft design with two opposed fireboxes and is a direct antecedent of the 19th-century example from the Ewenny Pottery re-erected at St Fagans National History Museum. Cadw kindly offered an award of a grant for the archaeological work on the monument as part of a Heritage Lottery Funded scheme to conserve and provide public access to the kiln.

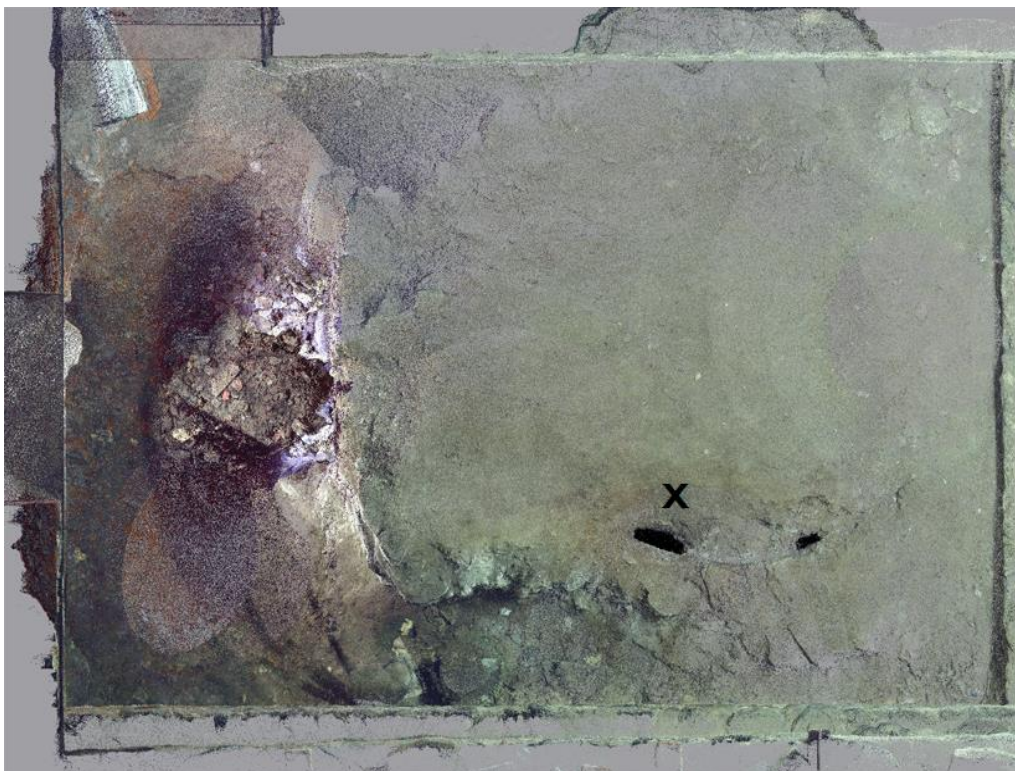
## 2. Background

2.1 The monument is a scheduled monument (PE437).

2.2 The monument is a pottery kiln, one of two discovered on the site. One of the kilns is recorded by Mortimer Wheeler under the auspices of the National Museum of Wales where the finds from its excavation are deposited (accession no. 21.46). Wheeler's survey was re-published by Eric Talbot in his survey of Medieval pottery production in Wales in the journal *Post-medieval Archaeology* volume 2 (1968), 122-127. How this record might relate to the monument as excavated and recorded in December 2016 is discussed below (paragraph 8).

2.3 Such was the good condition of the kiln when found and given its significance then recognised, the Hall trustees took far sighted decision to modify the design of the Memorial Hall to ensure its long term preservation. The extra costs were met by the Lord Marcher of the Barony of Cemais, Sir Martienne Lloyd (Reg Atkinson *pers.comm.*)

2.4 Talbot includes a note on the kiln by John Musty giving his opinion, probably on the basis of the original survey drawing rather than a site visit, that the kiln was of his type 1b – a single firebox serving a substructure consisting of a central drum and radiating bars to support the floor of the ware chamber. In doing so he drew analogies with the kiln of a similar date discovered at Crockerton, Wiltshire, most recently published (2016) by David Algar and Peter Saunders in *Wiltshire Archaeological and Natural History Magazine* 109, 173-188. A detailed examination of the monument on 26th January 2016 by David Dawson and Oliver Kent confirmed the findings of Karen Slade made in November 2013 and determined that the substructure was divided into two discreet halves and must have had a second firebox (Slade 2013)(figure 2.1). This is analogous with the later kilns recorded from Ewenny in 1949 by Nash Williams from Bridge Farm Nurseries and in the 1970s by Paul Hughes and Eurwyn Wiliam including the example now preserved at St Fagans National History Museum (Lewis, J., 1982. *The Ewenny Potteries*. Cardiff: National Museum of Wales, 48-51). It should be noted that these examples have additional flues running across the drum. The best analogy for the full subdivision of the substructure is the much less complete 18th-century kiln from site 13 at Donyatt in Somerset (Coleman Smith 2002)(see also 7.2 below). Dawson and Kent also confirmed that it is a very well-preserved example of its type of kiln (Dawson and Kent 2016).



*Figure 1 Plan view of the kiln before investigation. The exposed firebox is at the lefthand (east) side. The wall dividing the substructure into two halves could be clearly seen on the right inside vent X (BS).*

2.5 It is self-evident that the pottery kiln sits within the context of a pottery production site. The site of the kiln recorded by Wheeler is unknown but it had a single firebox and faced east ie. the opposite direction to the present kiln. There may have been more kilns which have so far gone unnoticed. Little is known of the forms of the structures that at this date would have been essential components of such a site – clay preparation including a settling

tank, clay storage, throwing and making room, ware drying space, fuel storage and storage for the finished ware. All this must have existed in the immediate vicinity of the surviving kiln. These may or may not have been confined to the curtilage of the current Memorial Hall plot.

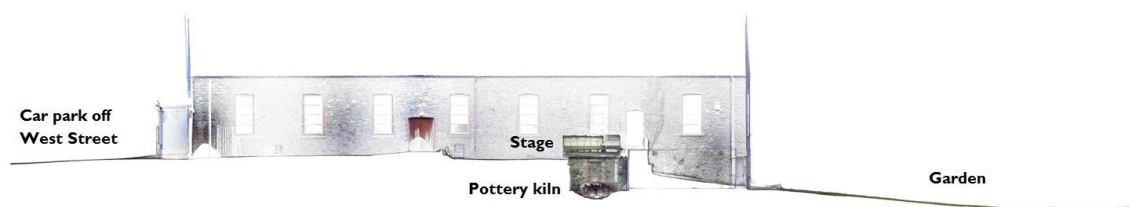
2.6 Eric Talbot also published pottery found at the site and which was presumed to be made here. It is competently made earthenware with a plain lead glaze used sparingly on only some forms, particularly jugs (Talbot 1968, 122-125). This type of ware was later discussed by Cathy O'Mahoney and is now usually known as Dyfed gravel-tempered ware (O'Mahoney 1985, 22-3).

2.7 Thanks to an award of funding by Cadw to the Newport Memorial Hall Medieval Kiln Project committee (25th August 2016), limited archaeological excavation down to the level of the ware chamber floor and a thorough survey was made of the kiln over four days in December 2016. The laser scan and photogrammetry was carried out by Bill Stebbing and David Mason of Scan to Plan as part of the programme of work carried out by David Dawson and Oliver Kent of the Bickley Ceramics Project and Nicholas Dawson of Archaeological Survey West assisted by Siobhan Ashe, Reg Atkinson, Dawn and Mike Marshall and other members of the local community (Dawson and Kent January 2017). Further archaeological excavation to clear the firebox and flues down to their original floor level, make sense of the sunken area in front of the kiln and update the laser scan point cloud prior to conservation work was undertaken with the additional assistance of Chris Webster on 7th and 8th May 2017. This evaluation arises from that work.

### 3. The site

3.1 The Hall is situated on the north side of West Street (NGR: SN 053 390) on the western edge of the medieval borough. As Nick Tavener has pointed out, there may be further occupation associated with medieval use of this possible burgage plot. The two plots immediately to the east are typical of medieval burgage plots being very long (north to south) but only about 10m wide. This is not true of the plot to the west.

3.2 The laser scan survey illustrates the way in which the buildings, including the kiln, have been terraced into the slope falling away northwards from the street frontage (figure 2).



*Figure 2 Section through the site from south to north showing the position of the kiln in relation to the hall and its stage (BS).*

3.3 The kiln base is oriented approximately ENE-WSW across the slope of the land. On its south side and possibly on its north the substructure was probably built into the ground surface to afford greater stability.

## **4. Objectives**

The written statement of investigation (WSI) set out in paragraphs 3.2 and 3.3 the objectives of the work as follows:

### **4.1 Project objectives**

The project demands:

- a) a good quality record of the monument prior to work commencing to which further digital data can be added;
- b) determination of the nature and state of preservation of the floor of the ware chamber – information essential for decision on the course that the conservation and further archaeological work should take;
- c) information upon which an evaluation can be made of the form of the kiln and method of firing and their significance in terms of the development of pottery production technology. This to be disseminated as widely as possible;
- d) involvement of the local community.

### **4.2 Research objectives**

The kiln has enormous potential to inform understanding of this type of monument and the significance of this particular monument.

The survey should determine:

- a) the full nature and condition of the accessible half of the interior of the kiln substructure. This will include the nature and condition of the structures supporting the floor and defining the nature of the flues within the floor;
- b) as much information as can be obtained about the nature and condition of the less accessible half of the substructure. This will prove or otherwise whether it is a mirror version of the accessible half and whether the second firebox still exists or has been truncated during the 1920s building works.

The excavation should determine:

- a) evidence for the construction of the ware chamber if it still exists (stone built or clay built);
- b) evidence of the nature of the fill;
- c) evidence of the nature and condition of the floor of the ware chamber;
- d) evidence of the way in which the kiln was loaded and fired.

## **5. Methodology**

5.1 Four geo-referenced points were established using a Trimble R10; two in the car park at the front and two in the rear garden.

5.2 A Faro X130 was deployed to record the 3D survey, supplemented by photogrammetry of those parts of the subterranean structure which could not be accessed in any other way.



5.3 The system of documenting the investigation follows that used by Nick Tavener for the watching brief. Context numbers 1 to 10 were assigned. Find were processed and marked NMH16 together with their context number.

5.4 The fill of the ware chamber was tested by stratigraphically excavating the southwest quadrant of 1920s and later fill. Similar excavation of two other quadrants confirmed that an excavation had been dug in the 1920s or possibly later roughly occupying the southwest quadrant. Its fill contained sherds of transfer-printed creamware, a sherd of porcelain, an unmarked clay pipe stem, the heel of a shoe and other material of a similar date as well as sherds of 15th/16th-century earthenware (figures 3 and 4). This intervention had damaged the structures over the internal flue, dislodging one of the fired-clay bars that support the roof (figures 5 and 12).

5.5 The layer of debris overlying the undisturbed fabric of the ware chamber support and the rest of the substructure consisted of semi-compacted clay and rubble fill containing fragments of slate, small quantities of sherds of 15th/16th-century earthenware, two of which were waste, fragments of fired clay clearly marked with the fingers of whoever had worked them into their original place, and two pieces of thin slate with glaze runs. This was removed down to the level of the compacted material forming the fill of the 'drum' and the slate forming the shell of the drum and the outer walls of the lower part of the kiln. The control quadrant (northwest) was removed in the process and the 1920s excavation was back-filled to provide support for the damaged area of the internal flue.

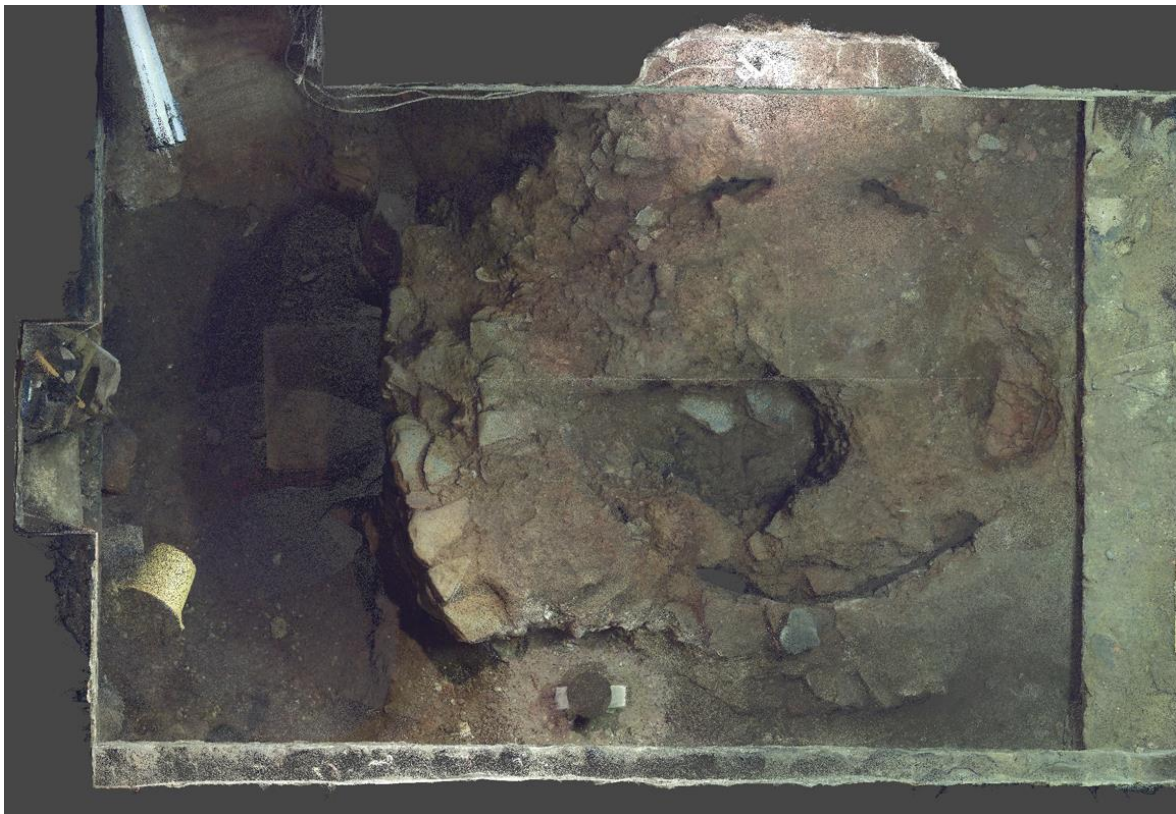


Figure 3 Plan view showing the 'excavation' of the 1920s (BS).

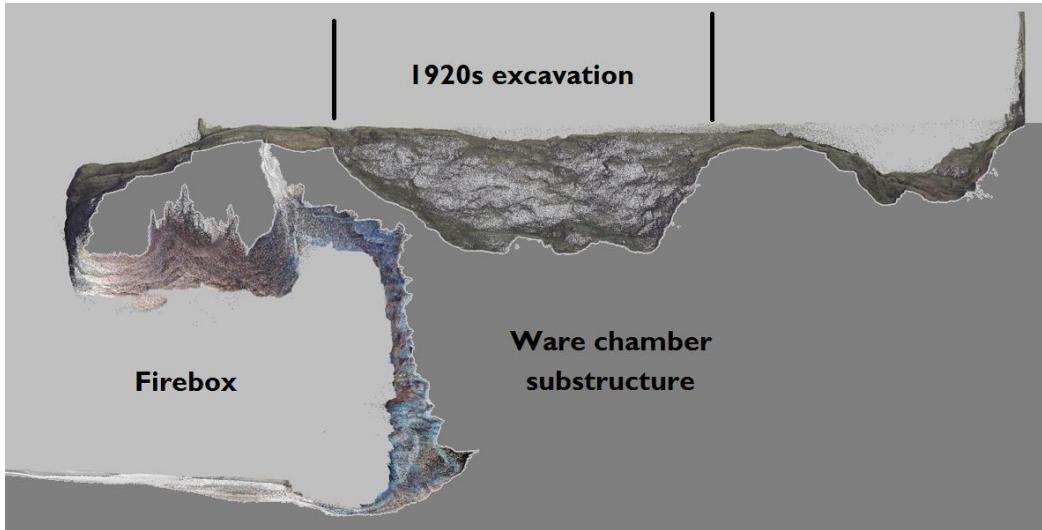


Figure 4 Section through the kiln showing the 'excavation' of the 1920s (BS).



Figure 5 The earlier excavation and damage it caused to the roof of the flue.

5.5 In May, the north-east corner of the ware chamber and adjoining wall was further cleaned. The apron in front of the firebox was taken down to the level of the firebox floor. Some of the 1920s trample was left but otherwise the sides were cleaned down to natural subsoil. The foundation cut into which the kiln has been built was evident on the south-west corner.

5.6 A final series of scans record the monument as left at the end of the investigation (figure 6). The otherwise inaccessible parts of the substructure were recorded using the expedient of a mobile telephone on the end of a selfie stick.



## 6. Description and interpretation of the kiln

### 6.1 Definitions

Updraft kiln – the hot gases enter under the ware chamber which acts as a chimney and draws the hot gases through the ware.

Firebox – the space where the fuel is burnt to fire the kiln.

Stoking area – the space in front of a firebox so the fireman can work.

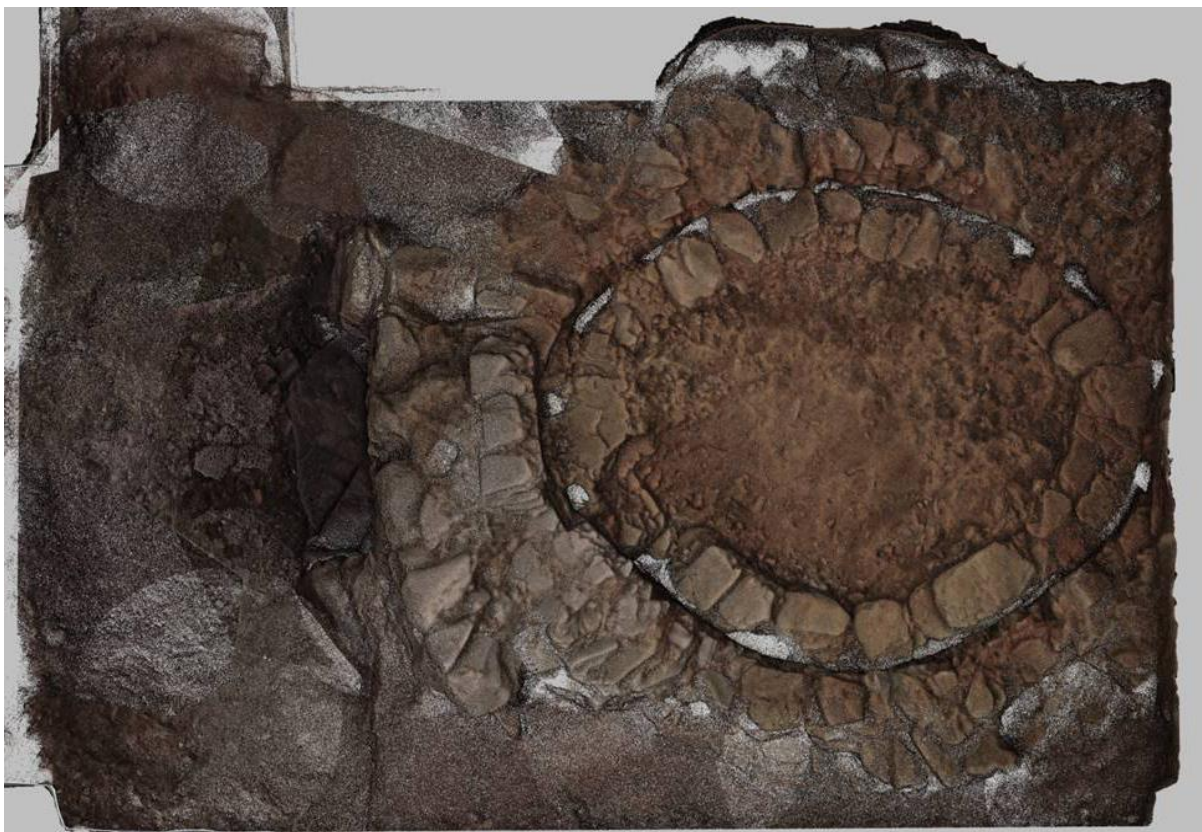
Substructure – the part of the kiln consisting of the fireboxes, a solid drum forming the main body of the ware chamber floor, flues to distribute the hot gases and the supports for the corbelled edge of the ware chamber floor.

Flues – passages under the ware chamber to distribute the hot gases before admitting them to the ware chamber.

Vent – an opening in the ware chamber floor allowing hot gases to rise from the flues into the ware chamber.

Ware chamber – the space built over the substructure where pottery is stacked and fired.

6.2 The monument consists of the base of an oval updraft kiln that measured 2.25m by 1.80m within the ware chamber (figures 6 and 7).



*Figure 6 Plan view of the kiln at the end of the investigation with debris removed (generated from the point cloud by Bill Stebbing). The vents are highlighted by being left in greyscale.*

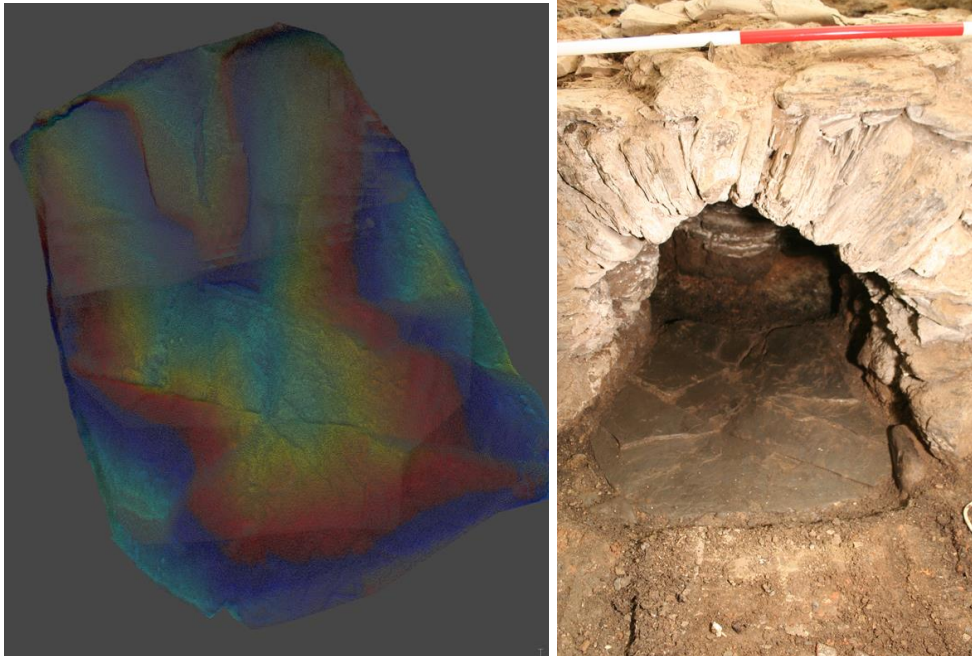


*Figure 7 Interior of the kiln looking west towards the surviving exposed firebox. Note the channel above the vents from the underfloor flues and the surviving modelled clay flue to the left of the far end of the ranging rod. The three stones that may form the threshold are just beyond the far end of the ranging rod.*

### 6.3 The fireboxes.

The western firebox measures 0.76m wide by 1.10m long by 0.72m tall at the front rising to 0.76m at the rear. It is built with an arched head in two distinct parts. The inner is constructed of relatively thin slates; the outer 0.37m of thicker blocks, possibly reflecting that the extension was added to the core substructure as it was built. The junction can be seen clearly in figures 4 and 8. It can also be seen that the firebox tapers slightly in plan to 0.64m whilst widening in its height as it meets the internal flue. The floor of the firebox consists of a single slab of slate 0.82m to 0.59m wide and 0.98m long. As can be seen in section (figure 4) and in the colourised contour record, the upper surface has worn towards the rear into a noticeable groove (figure 8).





*Figures 8 & 9 Colourised contour record of the surface of the slate slab forming the floor of the western firebox: the outer edge is at the bottom, the inner at the top (BS). The contours are at 15mm intervals. The photograph alongside shows the slab as seen from the mouth of the firebox.*

The existence of the easternmost firebox had been postulated by Slade in 2013 on the basis of the distinct division of the substructure into two halves. It was confirmed when photographs taken by mobile telephone through the newly cleared vents showed the jambs and arch of this second firebox open and undisturbed surviving under the 1920s cross-wall (figure 10). Following contemporary models it can be expected that this firebox will be the mirror image of the first.



*Figure 10 The jamb of the second firebox.*

#### 6.4 The central drum and the flues.

The way in which the central drum presents a rounded angular end to the mouth of the firebox can be seen in figures 11 and 12. The same two figures show the squared ends of the two flues where they meet the cross wall that separates them from the eastern flue system.

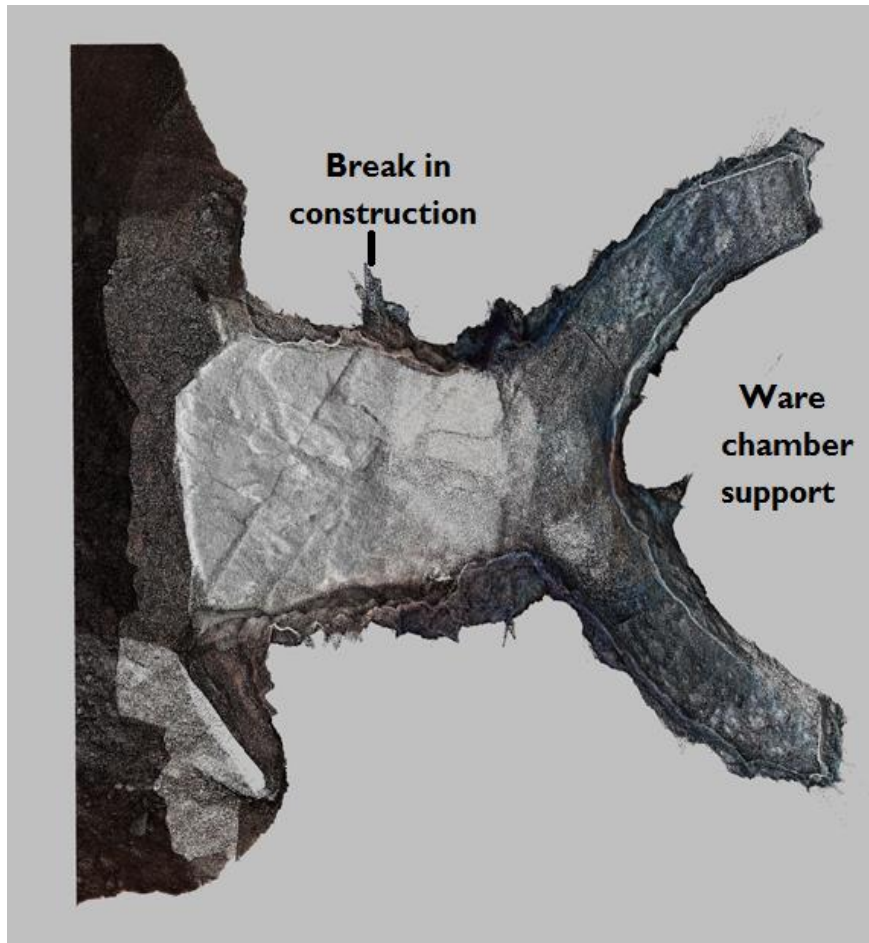


Figure 11 Plan of western firebox floor and western system of flues (BS).

The drum is made of a roughly coursed slate skin in-filled with compacted earth and fragments of slate. This skin is corbelled out at the top on either side of fired clay bars, approximately 70mm square in section, bridging the gap between the drum and the inner wall of the kiln approximately 820 to 850mm above the floor of the flue (figures 12 and 13). Although these bars look highly fractured it should be noted that because they are embedded in the stonework at either end that they are perfectly secure. Only one bar is lost probably because the support it had at one end had been removed in the earlier excavation.

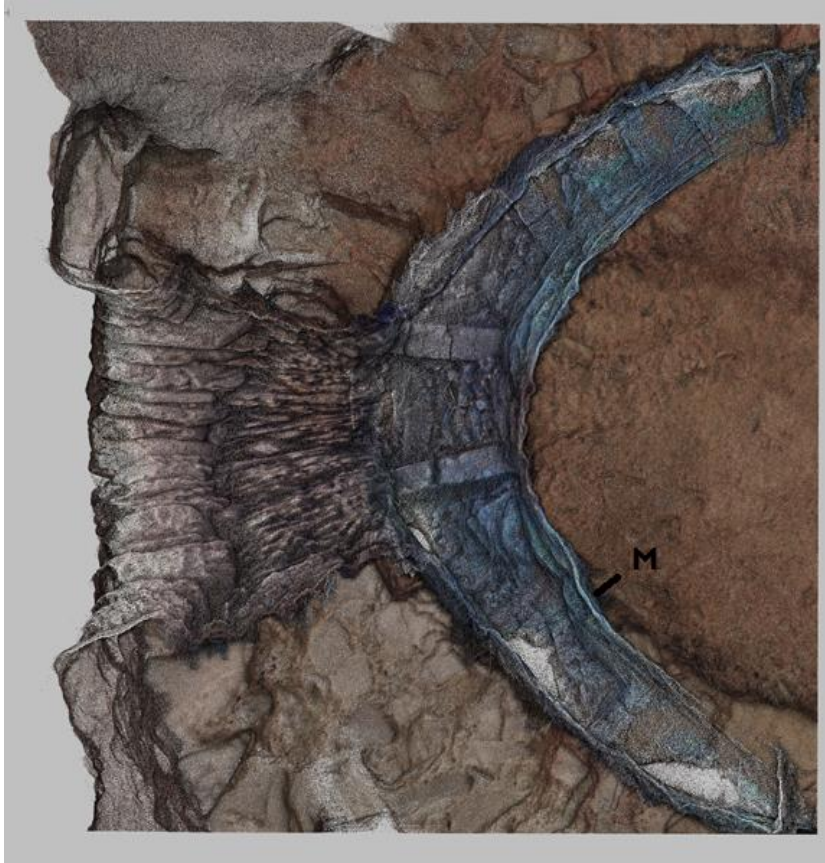
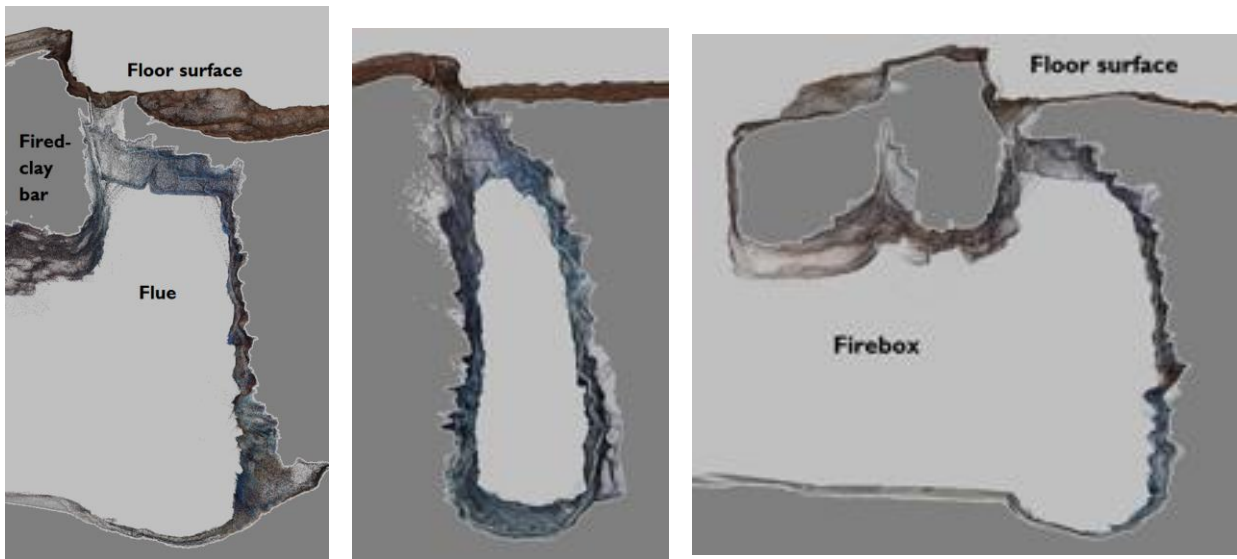


Figure 12 Plan view of the roof structure of the firebox and flues of the western half of the kiln. M indicates the position of the fired clay bar which was dislodged in the 1920s excavation (BS).



Figures 13, 14 and 15 Sections through the flue: 13 is on line A-A through a clay formed vent; 14 is more typical on line B-B and 15 on the line C-C; see figure 16 overleaf (not to scale) (BS).



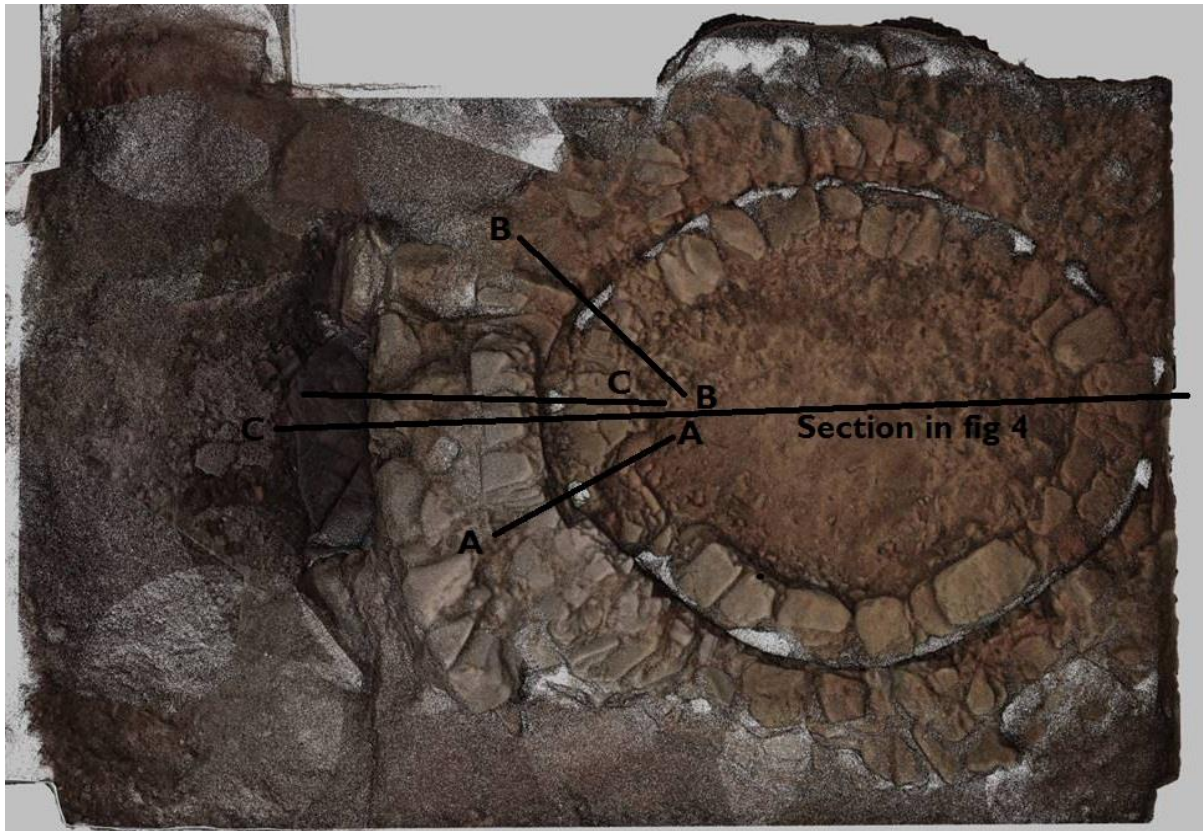


Figure 16 Positions of sections (BS).

The flues on either side of the drum vary from 270 to 285mm wide at the base and rise to about 790mm towards the top. The existence of the cross walls dividing the kiln base into two discreet halves was confirmed. No evidence was found of the existence of flues running across the ware chamber.

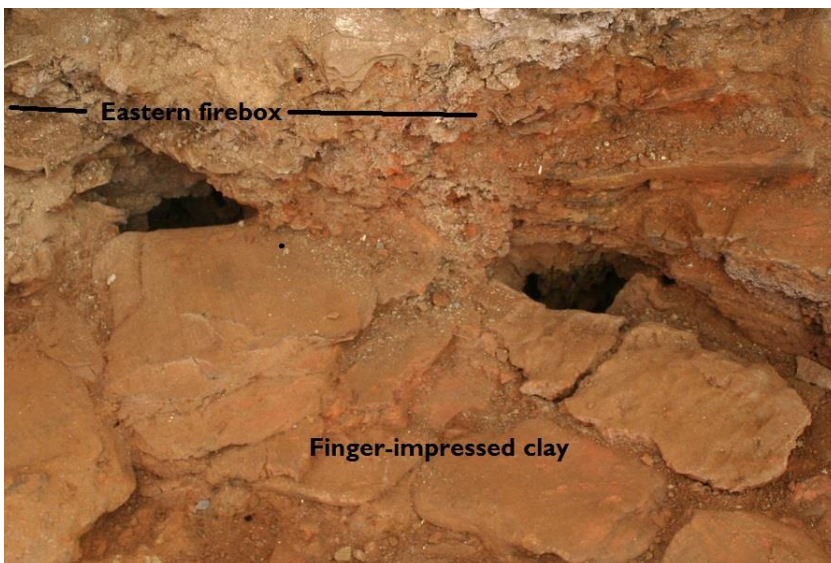
#### 6.5 The vents and the ware chamber floor.

At least two clay-formed vents survive in position in front of the western firebox (Figure 17 - V). The three clay built sides are impressed with the finger marks of the maker. The opening to the southwest measures 93mm along the inner wall of the ware chamber by a maximum of 51mm wide and is a maximum of 92mm deep. That to the northwest measures 113mm by 81mm. The top of the floor was approximately 900mm above the floor of the flues below. The slate edge within the area of the two vents is bonded with rammed clay that extends out into the floor for a short distance of 231mm). Other small areas of this surface are present further to the north. It is likely that the slates here represent the upper surface of the edge of the floor that was otherwise made of rammed clay. The surface is however entirely clean of glaze or other evidence of contact marks from pottery.



*Figure 17 The western end of the ware chamber floor showing two surviving clay-built vents (V) and a small area of rammed clay flooring surrounding and extending outwards from the slate edge to the floor. The damage to the left was caused by the test pit dug in 1921. The worn slabs above may have formed the threshold of a door to the ware chamber (see 6.7).*

There are further patches of clay impressed with finger marks at the eastern end of the ware chamber floor in a similar position in relation to the eastern firebox (Figure 18). To the south of the centre line a square slate-built vent matches those at the other end and may indicate the former presence of clay-built vents here too. This might suggest a symmetrical structure with small clay-built vents above the fireboxes and rectangular slate slots along the sides.



*Figure 18 The eastern end of the ware chamber floor showing patches of clay moulding another vent.*



Much of the rest of the floor has been removed leaving only the slate edge although there are patches of fired clay in the northwest corner. The top level of slates is missing along the southern half of the floor and in the area cut by the test pit dug in 1921. A channel about 35mm wide round the edge of the final course of the ware chamber support marks the line where the other square vents would have been (if Wheeler's survey is correct – see below). However the channel shows no sign of clay adhering to it and the vents here may have not been modelled in clay but left as slate. The area above the eastern firebox is crushed and disturbed, probably in the building of the 1920s cross wall, and the precise nature of the vents is unclear. The floor is remarkably clean and it is possible that slates were used as a cover. Disappointingly no slates with glaze runs were found *in situ*.

#### 6.6 The ware chamber

As none of the fired-clay fragments found in the kiln seem to have formed parts of a clay lining to the ware chamber, it seems unlikely that it was ever lined in clay. The evidence indicates that it was constructed of two parallel walls of slate with an in-fill of rubble. If evidence argued elsewhere is correct, it can be assumed that the chamber was about 2m high (Dawson and Kent 1999, 173).

#### 6.7 Evidence for a doorway into the ware chamber (Figure 19)

Above the western firebox and centrally placed are three large pieces of slate with rounded well-worn upper surfaces. They are fractured at the extremities on both sides but fully extend to form a level platform. On the east side the inner edge is marked by a distinct recess in the wall of the ware chamber which is at its highest point here. The inner face is sharply cut – these pieces are building stone rather than rubble. Given the size of the kiln, whether it was open-topped or roofed, a door of some kind would be likely. These are often placed above fireboxes. It would seem plausible that this represents the threshold of a door into the ware chamber. The slight flattening of the elliptical shape of the kiln at this end reflects this and distinguishes it from the eastern end which although partially hidden under the cross wall is nonetheless a continuous curve. It creates an apparent thinning in the ware chamber wall but the precise form of the walls at this point is difficult to determine in part because of the truncation of both sides by the foundation trenches for the hall and in part by post-excavation wear again on both sides.

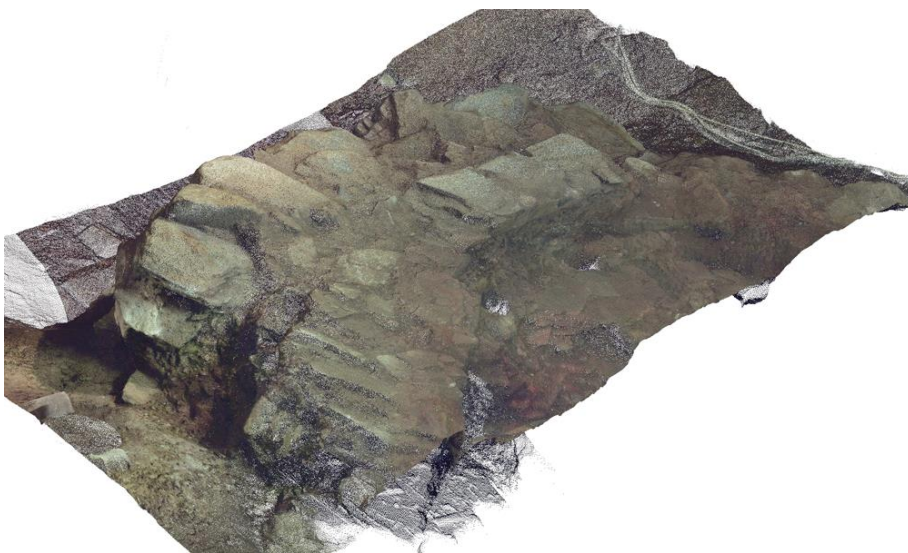


Figure 19 View of the threshold from the south east (BS).



The surviving upper surface of the 'threshold' measures 453>531mm wide and 233>238mm deep. The full width is approximately 700mm.

#### 6.8 Evidence of the construction of the kiln

Excavation of the area of the apron in front of the firebox showed that the kiln was built into the natural subsoil. Part of the foundation trench was clearly visible on the south-west corner (Figure 20). Later trample was left in place in front of the firebox to protect this surface.



*Figure 20 Natural subsoil exposed by excavation cut by the 1920s foundation trench for the hall on the right and for the original construction of the kiln on the left by the firebox.*

#### 6.9 Summary of the interpretation of the kiln

The well-preserved remains show that this is an updraught kiln with two opposed fireboxes whose substructure has been divided into discreet halves, each served by one of the fireboxes. It was constructed across the slope of the hill by excavating a space into this slope on the south (uphill side). The ware chamber is oval, measuring internally 2.25m by 1.80m with the long axes over the fireboxes. The ware chamber was accessed by a doorway (wicket) sited above the western firebox. This would have been 'bricked' in once the kiln had been loaded and was otherwise ready for firing. A little of the clay floor of the ware chamber survives though it is clean of the usual detritus of glazed firing – implying that there may have been a temporary floor covering of slates. The ware chamber walls are missing but as has been argued elsewhere most likely consisted of an open cylinder rising to about 2m which once loaded with pottery would have been covered with loose potsherds and tiles (Dawson and Kent 1999). The total height of the kiln from the level of the firebox floor to the top of the ware chamber would have been approximately 3m. It is difficult to judge the thickness of the ware chamber walls but they are likely to have been at least 0.5m at the base giving a total width also nearing 3m. In other words the kiln would have appeared impressively massive. Such a kiln was entirely capable of firing the kind of hard-fired earthenware found in quantities on the site. No evidence of the fuel used was found but such ungrated fireboxes were ideal for burning fuels such as wood and furze.

## **7. Significance of the kiln**

7.1 The initial view that the kiln is a survival of great significance has been strengthened:

- 1) it is a rarity for its date;
- 2) the detail of its construction, particularly the arrangement of the substructure of the ware chamber and system of distributing the heat from the two fireboxes, is remarkable;
- 3) it provides a linear descendent to the 19th/20th-century kiln from the Ewenny Pottery reconstructed at St Fagans National History Museum.

7.2 The nearest technological analogies to the Newport kiln, that is those with two fireboxes each on opposite sides and a clear dividing wall between the two halves of the substructure, are at Brill in Buckinghamshire, Limpsfield in Surrey and the much later series of kilns at Ewenny in South Glamorgan. Brill has been dated by archaeomagnetic means to the early 14th century (Jope 1953-4). Limpsfield is about the same date and is remarkable for the complex of structures that accompany the kiln, unfortunately not thoroughly reported (Jope 1956, 285 and republished in Moorhouse 1961, 101). The 18th/19th-century kiln at Bridge Farm Nursery and the 19th-century kiln at Hernston, both in the Ewenny district, have been mentioned above, as has the kiln from the Ewenny Pottery re-erected at St Fagans (Lewis 1982, 48-53).

7.3 The kiln at Crockerton which is contemporary with the Newport kilns, was cited by Musty as a near parallel on the basis of the use of fired-clay bars to span the flues but see paragraph 8 below (Musty 1968). Unfortunately this kiln structure was not as well-preserved nor is there a record so detailed as to be sure of the method of construction, in particular to be sure that the bars at Crockerton were embedded in a corbelled-out wall (Algar and Saunders 2016).

## **8. The kiln and the Wheeler record**

8.1 The kiln as recorded in December 2016 differs in a number of respects from the record of the 1921 excavations (Figure 21: Talbot 1968, 126). The shape is oval not circular. The substructure is divided into two to reflect two fireboxes. Each half had six clay-bar supports not a total of 18. The detail of the surviving clay-built vents is very much like the structures shown in Mortimer Wheeler's drawings but can only be shown to occur in certain limited areas of the circumference. The presence of undisturbed late medieval deposits over three-quarters of the kiln area demonstrates that this kiln was not fully excavated in 1921 and the shape of the kiln, the number and position of support bars and vents and the presence of a second firebox could not then have been determined.

LATE MEDIAEVAL POTTERY KILN  
AT NEWPORT PEMBROKESHIRE

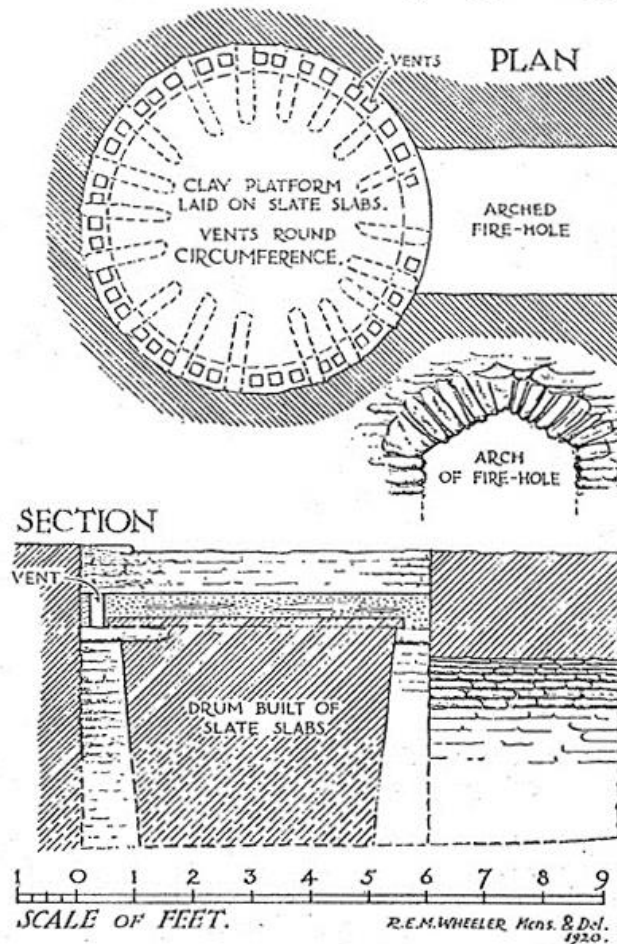


FIG. 50

(Reproduced by kind permission of Sir Mortimer Wheeler and the National Museum of Wales.)

Figure 21 The drawing reproduced in Talbot 1968, 126.

8.2 Then there is the question of what do the Wheeler drawings represent. The correspondence between the National Museum of Wales, Wheeler and the site architect, D O Evans, indicates that two kilns had been found and that Wheeler visited and 'made plans' on the morning of 27 January 1921 (Dawn Marshall *pers com* based on photocopies of the correspondence provided courtesy of Sian Iles of the National Museum of Wales). Shortly afterwards in a letter to the architect he asked that the second kiln be uncovered before the first was destroyed to build the foundations for the hall (letter Wheeler to Evans 31 Jan 1921). This suggests he will have seen the first kiln fully excavated but the second was only partially exposed at the time he was drawing his plans. There is no record of a second visit before the end of March and the full excavation of the second kiln does not appear to have happened. The surviving kiln is therefore the second kiln and the drawings are of the first. This would explain the similarities and discrepancies between the drawings and the surviving kiln – both built in a similar manner but not identical and not seen to compare in their entirety.



8.3 The first kiln, the one that Wheeler recorded, is substantially smaller and is estimated at being less than half the volume of the ware chamber of the second, surviving kiln (3m<sup>3</sup> as opposed to 6-7m<sup>3</sup>). Another major difference with kiln 2 is that kiln 1 being smaller has a single firebox and a different disposition of vents round the flue.

8.4 In all this it should be remembered that to Wheeler and his team medieval pottery kilns were a relatively unknown type of monument. It is very much to their credit that the significance of the kiln was recognised and it was not only recorded but the argument was made successfully for the preservation of one of them.

## 9. Other structures found on site

9.1 A pit was discovered during site watching by Nick Tavener and speculation was aroused as to whether the structure could be evidence of kiln 1 (Tavener April 2017). The find will be reported in the full site report. Given speculation that it might be evidence of kiln 1, the feature was surveyed to ascertain its relationship with kiln 2 (Figures 22 & 23).



Figure 22 The relative position of the feature and kiln 2, a difference of 750mm between the bottom of the feature (left) and the floor of the firebox of kiln 2 (right) (BS).

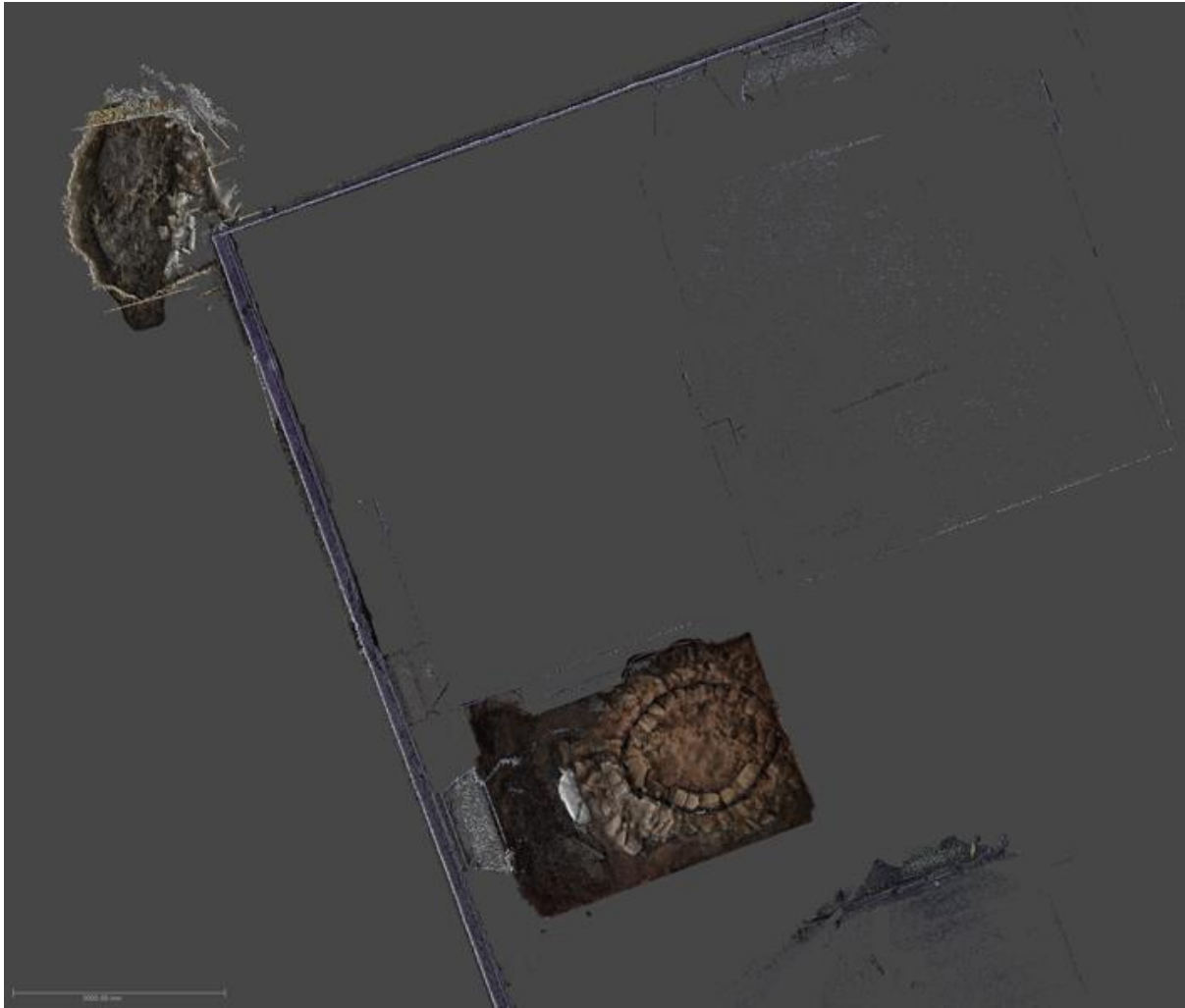


Figure 23 The relative position of the feature, the north-west corner of the hall and kiln 2 (BS).

9.2 The precise nature of this feature may be determined by further excavation by Nick Tavener but it seems unlikely that it is the remains of kiln 1.

9.3 No other structures have been found that might be associated with pottery production.

## 10 The kiln and its products

The pottery recovered was similar to that recorded by Talbot from the kiln site and from Newport Castle (Talbot 1968, 122-125). It is of the general type of ware defined by Cathy O'Mahoney as Dyfed gravel tempered ware (O'Mahoney 1985). The dating and extensive coastal distribution of this ware is discussed by Cliona Papazian and Ewen Campbell in *Medieval and Later Pottery in Wales* 13, 56-7 (Papazian and Campbell 1992). It should be noted that several sources of this ware besides the Newport kilns are suspected.

The pottery found in the investigation of the kiln will be further assessed and processed with the substantial quantity recovered during the watching brief in accordance with the joint *Standard for Pottery Studies in Archaeology* and the *Guidelines for Best Practice for Archaeological and Historic pottery Production Sites* (Barclay et al 2016; White et al 2015). Its analysis will form a major part of the final archaeological report. Initial inspection has led to

a wider range of forms being identified than were recorded by Talbot. All possible kiln furniture and pieces of kiln structure have also been recovered and will be similarly processed and assessed for evidence of kiln construction, packing and firing.

## **11 Conservation**

11.1 The earth deposits on either side of the kiln have become much eroded with footfall and damage to the fabric of the kiln has been caused. Alternative solutions have been found to provide access to the raised area, now walled off, at the eastern end of the space in which the kiln is preserved.

11.2 The kiln structure has since been repaired by Elliott Ryder Conservation (Kieran Elliott and Susanne Ryder) and they have made recommendations for the future care and monitoring of the structure (Elliott and Ryder 2017).

11.3 In our view, the structure is in sound condition but should not be trampled over. One area of weakness that needs to be remembered in future considerations of load-bearing on the central drum is our backfilling of the 1920s excavation.

## **12 Conclusion**

12.1 The monument is as well, possibly better, preserved than was suspected. Essentially, apart from an intervention into the interior of the kiln in the 1920s, it remained untouched since its original burial until our modest investigation.

### **12.2 Project objectives**

- a) a good quality record of the monument prior to, during and at the end of the investigation has been secured and a copy provided to the Memorial Hall Committee (there is more to be added);
- b) the fragmentary nature of the floor has been determined and the investigation provides information for future decisions on how the monument is to be conserved;
- c) the survey and investigation has established the state of preservation of the kiln and the basis for further evaluation of its significance. The information will be as widely disseminated as possible (a blog has been published by Oliver Kent [ [drojkent.wordpress.com](http://drojkent.wordpress.com) ] and linked to the Medieval Pottery Research Group Facebook page);
- d) members of the local community were involved in the fieldwork and continue to be in the post-excavation process.

### **12.3 Research objectives**

The objectives of the survey and excavation have been met. Further work is progressing on processing all the survey data and on determining the way the kiln was loaded and fired. In general terms the kiln probably worked in a similar way to the reconstruction of the reconstruction of the later kilns from Barnstaple Potters Lane kiln 2 and Donyatt site 13 as described by Dawson and Kent (Dawson and Kent 1999, 171-175; Dawsons and Kents 2012, 27-29).

12.4 A full report will be prepared in collaboration with Nick Tavener following completion of the archaeological watching brief. The possible relationship between the two kilns and with other structures on the site will be discussed there.



### 13 Acknowledgements

The authors would like to record our thanks to Polly Groom of Cadw for facilitating scheduled monument consent and funding and for her encouragement, our colleague, Nick Tavener, who is undertaking the watching brief of the building works, for his continuing collaboration, the Newport Memorial Hall Medieval Hall Project team for their warm hospitality and enthusiastic support, in particular Siobhan Ashe (the Project Manager), Reg Atkinson, Dawn and Mike Mitchell and Audrey Richards, and for volunteering to do most of the hard work of processing the finds, Julian Bishop, the project architect, Sian Iles of the National Museum of Wales for her assistance, Kieran Elliott and Susanne Ryder of Elliott Ryder Conservation for their cooperation and to our colleagues, Bill Stebbing and David Mason of Scan to Plan, Nicholas Dawson of Archaeological Survey West and Chris Webster of the South West Heritage Trust for their expert services and assistance.

### 14 References

#### Unpublished sources

Correspondence between the National Museum of Wales, Mr George Eyre Evans, on behalf of the Memorial Hall Committee, and others regarding the Newport Kiln. National Museum of Wales, associated with accession number 21.46.

Dawson, D and Kent, O, March 2016. *Report on the Interpretation, Condition, Care and Presentation of the Pottery Kiln Preserved at the Memorial Hall, Newport, Pembrokeshire*. Report to the Newport Memorial Hall Committee.

Dawson, D, Kent, O and Tavener N, October 2016, *Newport Memorial Hall Medieval Kiln Project: Written Statement of Investigation for 1) archaeological investigation, evaluation and record of the scheduled monument 2) an archaeological watching brief*. Report to the Newport Memorial Hall Committee.

Dawson, D, and Kent, O, January 2017. *Newport Memorial Hall Medieval Kiln: archaeological investigation, record and evaluation; interim report*. Report to Cadw and the Newport Memorial Hall Committee.

Elliott, K, and Ryder S, 2017. *Preliminary Final Report*. Report to Cadw and the Newport Memorial Hall Committee.

Slade, K, November 2013. *The Significance of the Newport Kiln, Pembrokeshire*. Company of Artisans. Report to the Newport Memorial Hall Committee.

Tavener, N, April 2017. *Kiln 1 Newport Memorial Hall, West Street, Newport, Pembrokeshire*. Report to the Newport Memorial Hall Committee.

#### Published sources

Algar, D and Saunders, P, 2016. 'Post-medieval pottery kilns at Crockerton, Wiltshire: archaeological investigations in 1967 and 1983', *Wiltshire Archaeological and Natural History Magazine* 109, 173-188.

Barclay, A, Knight, D, Booth, P, Evans, J, Brown, D, and Wood, I, 2016. *A Standard for pottery Studies in Archaeology*. London: Medieval Pottery Research Group on behalf of the Prehistoric Ceramics Research Group, the Study Group for Roman Pottery and the Medieval Pottery Research Group.

Coleman-Smith, R, 2002, 'Excavations in the Donyatt Potteries, site 13', *Post-medieval Archaeology* 36, 118-32.

- Dawson, D, and Kent, O, 1999. 'Reduction fired low temperature ceramics', *Post-medieval Archaeology*, 33, 164-178.
- Dawson, D, and Kent, O, Dawson V, and Kent, H, 2012. *The Bickley Book; the Bickley Ceramics Project 1981-2010*. Bristol: the Bickley Ceramics Project. Available on line at [www.blurb.co.uk](http://www.blurb.co.uk)
- Jope, E M, 1953-4. 'Medieval pottery kilns at Brill, Buckinghamshire: preliminary report on excavations in 1953', *Records of Bucks*, 16, 39-41.
- Jope, E M, 1956. 'Ceramics: medieval' in Singer, C, and Holmyard, E J (eds), *A History of Technology, Volume 2. Mediterranean Civilisation and the Middle Ages*. Oxford: Oxford University Press, 284-310.
- Lewis, J M, 1982. *The Ewenny Potteries*. Cardiff: Amgueddfa Genedlaethol Cymru/National Museum of Wales.
- Moorhouse, S, 1981. 'The medieval pottery industry and its markets' in Crossley, D W (ed), *Medieval Industry CBA Research Report 40*, 96-125.
- Musty, J, 1968. 'The Newport Pottery Kiln', in Talbot, E J, 125-127.
- O'Mahoney, C, 1985. 'West Wales Fabrics – an interim note', *Medieval and Later Pottery in Wales* 8, 20-4.
- Papazian, C, and Campbell, E, 1992. 'Medieval Pottery and Roof-tiles in Wales AD 1100-1600', *Medieval and Later Pottery in Wales* 13.
- Talbot, E J, 1968. 'Welsh Ceramics: a documentary and archaeological survey', *Post-medieval Archaeology*, 2, 119-139.
- White, H, Paynter, S, and Brown, D, 2015. *Archaeological and Historic Pottery Production Sites: guidelines for best practice*. Swindon: Historic England.

June 2017

### **Appendix I: the geo-referenced survey points from Bill Stebbing**

X and Y values relate to the Ordnance Survey National Grid; Z values to metres above the Newlyn datum.

Point 1 near rear boundary of the garden:-

|         |           |          |            |        |        |
|---------|-----------|----------|------------|--------|--------|
| Easting | 205357.72 | Northing | 239097.491 | Height | 33.953 |
|---------|-----------|----------|------------|--------|--------|

Point 20 near east boundary hedge of the garden:-

|         |            |          |            |        |        |
|---------|------------|----------|------------|--------|--------|
| Easting | 205370.712 | Northing | 239089.904 | Height | 34.404 |
|---------|------------|----------|------------|--------|--------|

Point 18 on east side of front edge of the car park:-

|         |            |          |          |        |        |
|---------|------------|----------|----------|--------|--------|
| Easting | 205388.562 | Northing | 239037.4 | Height | 36.823 |
|---------|------------|----------|----------|--------|--------|

Point 08 on west side of front edge of car park:-

|         |            |          |            |        |        |
|---------|------------|----------|------------|--------|--------|
| Easting | 205379.023 | Northing | 239033.742 | Height | 36.619 |
|---------|------------|----------|------------|--------|--------|

Error 20mm – ie. good.