

## **Treasure Act 1996 (Case 20.16 Wales)**

### **A Late Bronze Age hoard from Llanddeusant Community, Carmarthenshire**

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#### ***1.0 Discovery (CG & AG)***

A Late Bronze Age hoard comprising 20 artefacts, represented by 22 fragments, was first reported to Adelle Bricking, PAS Cymru Finds Recording Officer on Sunday 15<sup>th</sup> November 2020. Independently, the find was also brought to the attention of Alice Pyper of Dyfed Archaeological Trust on Monday 16<sup>th</sup> November 2020. The hoard was found by Mr. Richard Trew while metal-detecting in woodland in Llanddeusant Community, Carmarthenshire, on Saturday 14<sup>th</sup> November 2020, with two additional fragments also discovered subsequently on Sunday 22<sup>nd</sup> November 2020. The precise grid reference is provided on the Treasure Receipt.

The hoard was handed in to the National Museum Cardiff for safe-keeping and reporting on 4<sup>th</sup> December 2020. The finder reported the discovery to H.M. Coroner for Carmarthenshire and Pembrokeshire on 17<sup>th</sup> November 2020, and a treasure receipt was completed and sent to the Coroner for Carmarthenshire and Pembrokeshire on Thursday 26<sup>th</sup> November 2020.

#### ***2.0 Account of discovery (CG)***

The finder reported that the hoard had been discovered on a small spur of land between two streams, on steeply sloping land. The artefacts were all found as a single non-dispersed directly associated group between depths of approximately 5cm to 33cm (2-13 inches) beneath the surface. He reported digging through the topsoil before encountering firmer clayey soil deposits deeper down, with clay containing greater quantities of stone being exposed at the base of the detector pit.

The artefacts were described as buried in a tightly packed group. The two conjoining fragments of a spearhead (No. 1 *below*) were found at the top of the hoard at a depth of 5-7.5cm (2-3 inches) beneath the surface. Both fragments were reported as lying flat, with the socket and lower blade fragment being located on top of the upper blade fragment. Below these were the twelve socketed axes (Nos. 5-16, *below*) and a spearhead blade fragment (No. 2, *below*), with the base of the lowest axe at a depth of 33cm (13 inches). Once the artefacts were collected, they were taken to the landowner's property and cleaned with rainwater, at which time the majority of soil was removed from the sockets of the finds. The spear ferrule fragments and casting jet (Nos. 3, 4, 20) were later found on the 22<sup>nd</sup> November 2020 amongst the loose soil generated when the detector pit was dug. On later inspection of one of the socketed axes (No 7, *below*), it became apparent that three further bronze artefact fragments (Nos. 17-19, *below*) had been inserted into the socket, with the socket hammered shut and pinning the artefacts, whose ends projected from the socket.

During the site investigation, the finder emphasised how poor the weather conditions were, and so was unable to recollect further details about the placement of the objects owing to the

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pit filling with rainwater at a rapid rate. There are, however, a series of photographs which were taken whilst the artefacts were being removed from the archaeological feature – the details of which are described below. The decision by the finder to document the discovery through a series of photographs has provided additional information about the placing of the artefacts within the hoard, the details of which are described below. This is of archaeological importance, while also confirming the closeness of direct association of the artefacts in the group.

At slightly greater depths than the two fragments of the bronze spearhead (No. 1) was discovered a slender faceted axe (No. 13), the placement of which is not evident. At the same depth, the next discoveries were of a ribbed socketed axe blade fragment (No. 16) and a socketed axe with a blocked socket (Axe No. 7, with fragments 17, 18 & 19). Based on the displacement of soil between photographs, both artefacts appear to have been laid flat with the former appearing to have been removed from the centre of the metal-detector pit, and the latter appearing to have been removed from northern side of the pit. At a similar level to the previous artefacts, the next discovery was the spearhead blade fragment (No. 2) which was laid flat alongside the socket-end of a complete socketed axe (No. 12), placed vertically with the blade-end facing downwards.

At a slightly greater depth to the previous group of artefacts, another socketed axe (No. 11) was discovered lying flat with the blade-end facing approximately south-west. Further artefacts were discovered at a similar or slightly lower depth (Nos. 5, 6, 8, 10, 14, 15), but there are no photographs which clearly document their placement, or the order in which they were removed from the pit. The last artefact to be photographed was a small socketed axe (No. 9), which appears to have been placed at the base of the pit, at an approximate depth of 33cm.

### ***3.0 Site Investigation (CE & CG)***

Following the discovery of the hoard, staff of the Dyfed Archaeological Trust Field Services Section, led by one of the authors (CE), were commissioned to undertake an archaeological investigation of the findspot, with the aim of investigating the site and determining whether the hoard was an isolated feature or part of an archaeological site. This was enabled through grant funding released by Cadw, the historic environment service of the Welsh Government. The investigation was undertaken in two parts: firstly, a geophysical survey was undertaken over a 0.04ha area over the hoard find-spot on 17<sup>th</sup> March 2021. Secondly, the hand excavation of a test-pit was undertaken over the hoard find-spot on 7<sup>th</sup> May 2021. The outcomes of this investigation have been presented in a Dyfed Archaeological Trust report for Cadw for the purpose of informing this treasure report (Enright 2021).

The geophysical survey plot obtained, covering two partial grid square areas of 20m by 20m over the hoard find-spot, identified no features of definite archaeological origin. A number of possible pit features were recorded, but as these had no discernible pattern, grouping or association with an archaeological feature, there is little firm and positive evidence to support an archaeological interpretation, as opposed to natural or geological origin. The most likely explanation is that these anomalies are geological or natural soil features which, given the woodland setting, most likely represent tree-throws (former root boles of trees/bushes).

With the help of the finder and with the agreement of the landowner, an archaeological investigation of the findspot was undertaken by two of the authors (CE & CG). The purposes of this fieldwork were fourfold: firstly, to clarify the relative locations of all the finds, to the best of the finder's recollection, and establishing their precise locations in relation to the Ordnance Survey grid. Secondly, the aim was to hand-excavate a test pit around the main metal-detector pit from which artefacts had been retrieved, in order to investigate the burial context of the find and to reveal any remaining archaeological evidence relating to their manner of burial. Thirdly, the aim was to establish whether additional artefacts, also treasure by association with the reported finds, still remained in the ground. Finally, the landscape location selected for the burial of this archaeological material could be observed and photographed, potentially revealing insights behind the selection of this place for the burial of this Bronze Age artefact group.

The landowner had placed a blue fencing stake to mark the location of the hoard find-spot following its initial discovery, which made relocating the find-spot relatively straightforward. A test-pit, 1.00m by 1.00m in size was hand-excavated immediately over the centre of the detector pit, which had not been backfilled since it was excavated in November 2020. The test pit was initially half-sectioned, removing the southern half first. It was excavated to an average depth of approximately 0.15m and this revealed that the trench was overlain by a 0.05m thick upper layer of turf with a grey-brown silt root-mat. Beneath the turf was a sub-soil consisting of a firm layer of silty clay, orange-brown in colour with occasional sub-angular stone inclusions. The observation made by the finder of there being firmer clayey soil deposits with greater quantities of stone deeper down was not obvious to the authors (CG & CE) throughout this archaeological investigation. Below the topsoil, it was also not possible to see and differentiate between an upper anthropogenic soil layer overlying the natural sub-soil, as the soils were virtually identical.

The detector pit was cut through the turf and soil layer to a depth of approximately 0.36m; it was approximately 0.35m wide at the top, tapering towards its base. There was no evidence to suggest that there were any more artefacts in and around the detectorist pit. During removal of deposits from the southern half of the trench, small quantities of in-situ copper alloy staining were observed in the natural silty clay soil, indicating the recent juxtaposition of corroded bronze, and therefore confirming the place of the buried hoard. The excavation of a test pit over the location of the rediscovered findspot indicated that the metal detector pit, created when the artefacts were retrieved from the ground, had removed all evidence of the original burial context.

The southern facing section of the test pit was recorded, drawn and photographed before the remaining half of the trench was removed to fully expose the metal-detector pit. At this stage, the trench was scanned with a metal detector which detected no further signals. To confirm that there were no surviving remnants of the original pit or further finds, a 0.50 by 0.50m sondage was excavated immediately over the metal detector pit, to a depth of 0.50m below the ground surface. There was no evidence of other deposits relating to the detectorist pit or the original hoard pit in the sondage. Prior to backfilling the excavation trench, sondage and excavated material were scanned with a metal detector; no signals were returned. With this in mind, it is probable that the hoard was buried within a discrete and isolated pit in the ground, whose dimensions were less than those of the detector pit (i.e., 0.35m wide, 0.36m deep).

A soil profile was drawn and photographs taken of the south facing section of the test pit, and the characteristics of the soil and detector pit recorded. A series of photographs were also taken to record the location of the find-spots within their immediate landscape setting. Due to the sheltered location, it was not possible to survey the test pit using a satellite signal for a GPS receiver. A total station could be used to create an accurate map of the area, but it would need a traverse to tie it to a known point and was beyond the scope of this investigation.

#### **4.0 Descriptions (CG)**

##### **1. Plain Pegged Spearhead with a long flame-shaped blade of Type 11A – 2 joining fragments**

*Dimensions lower fragment: surviving length approx. 160.0mm; maximum surviving blade width 50.6mm; surviving blade length 68.2mm; socket length 90.0mm; maximum external diameter of socket 28.8mm; maximum internal diameter of socket 25.2mm; diameter of peg hole (1) approx. 7mm; diameter of peg hole (2) approx. 7.8mm; weight (before conservation) 158.6g*

*Dimensions upper fragment: surviving length approx. 163.0mm; max, blade width 48.5mm; weight (before conservation) 111.8g*

*Estimated combined length of lower and upper fragment approx. 323.0mm; combined surviving weight (before conservation) 270.4g*

This is a virtually complete Plain Pegged spearhead of bronze which is in two joining fragments, roughly equal in length. The spearhead has a flame-shaped blade which is missing most of the original blade edge as well as a small portion of the mid-rib on the upper fragment. The blade edges follow a smooth curve from the blade/socket junction through the point of maximum width leading to the tip. The midrib is circular in cross-section, with the midrib sides gradually converging towards the tip end from the lower blade where the midrib merges with the socket. Most of the blade edges are damaged, but there are sections on the lower half of the blade where original edges can be seen. The blade has a bevelled edge which is a maximum of 2-3mm wide, surviving best on the lower blade edges. Both peg-holes are complete and circular shaped and are located 41.9-42.9mm from the socket mouth. The two fragments have a good join, the break having been caused in antiquity and located across the point of maximum width of the blade, approximately 30% of the way up the blade.

The spearhead shows signs that it was broken in antiquity: firstly, the breakage along both fragments is soil covered and sufficiently eroded to suggest that the break occurred in antiquity. Secondly, on one face and in the middle of the mid-rib, there are two indentations (dimensions of both: c. 11x5mm; height c. 1mm) which appear to have been made by a small blunt tool. The uppermost of these two impact marks is located across where the spearhead has been broken, indicating that the object was struck prior to breaking. Where the upper break has occurred, the spearhead is transversely bent approximately 10 degrees.

The spearhead has an overall dark grey-green patination on one side, merging to a dull brown on the other side across the upper blade end. The surface of both sides is covered in uneven patches of green corrosion. Light green powdery surfaces can be seen along the eroded blade edge and where the break has occurred.

## **2. Probable Group 12 Spearhead - blade fragment**

*Dimensions: maximum surviving length 31.1mm; maximum surviving width 46.4mm; maximum surviving width of internal aperture 21.6mm; maximum surviving thickness 8.3mm; surviving weight (before conservation) 25.0g*

This is a lower blade fragment of a bronze spearhead. Originally, the spearhead would have had a leaf or flame-shaped blade. Although deformed, it is clear that the spearhead did not have a central mid-rib. Instead, the narrow and wide dimensions of the aperture and the thin blade walls suggest that this spearhead had a hollow blade, which is a diagnostic feature. The blade edge has a well-defined stepped bevel approximately 3.5mm wide. The central aperture has been distorted so that it appears sub-rectangular in cross section, suggesting that it once might have been oval-shaped. The spearhead has been damaged in antiquity. The upper and lower break edges are soil covered and caused when the object was broken up before burial. The spearhead has also been crushed to the extent that there is a jagged tear located along the junction of the solid blade and the aperture, probably through repeated hammering.

The fragment has a grey-green patina on one face, merging to grey-brown patina on the opposite face. A small section of original blade surface survives which has a dark grey-green patina.

## **3. Spearhead ferrule fragment - 2 fragments**

*Dimensions main fragment: max surviving length 48.4 mm; external diameter 15-15.5mm; internal diameter 12.5-13mm; surviving weight (before conservation) 12.9g*

*Dimensions small fragment: length 12.8mm; width 5.5mm; weight (before conservation) 0.2g*

*Combined surviving weight of two fragments (before conservation) 13.1g*

This is a fragment (with accompanying small wall fragment) of a tubular bronze spear-ferrule. Both ends of the ferrule are broken, which makes it impossible to determine its original length. The ferrule once had a circular cross-section with straight and parallel/near-parallel sides. The ferrule has been damaged in antiquity and post-deposition. The lower end has fragmented unevenly and has been pinched or struck, probably during antiquity, resulting in the flattening and compression of the original circular cross-section. The small socket wall fragment was detached post-deposition, but only partly accounts for the loss witnessed as a triangular shaped hole (20.0 by 7.7mm) visible in one face.

The fragment has an overall grey-green patina. Small, localised areas of bronze concretion can be seen on both sides towards the compressed break edge. The upper and lower breaks have light green powdery edges.

## **4. Spearhead ferrule fragment**

*Dimensions: max surviving length 31.1mm; maximum width 19.7mm; surviving external diameter 13.7-16.7mm; surviving internal diameter 10.2-14.3mm; diameter of surviving rivet-holes approx. 3.4mm; surviving weight (before conservation) 9.8g*

This is a mid-section fragment of a tubular bronze spear ferrule. Both ends are open and with breaks evident which makes it impossible to determine its original length. The ferrule once had a circular cross-section with straight or slightly tapering sides, but has been distorted along its entire length with one end differentially compressed and flattened through probable

impact. The remains of two opposing rivet-holes can be seen around the circuit one of the break edges. There are a few fine horizontal and diagonal marks visible within the patinated surface, suggesting that they occurred through use or when the object was broken prior to burial. The break edges are soil covered, indicating that the object was broken in antiquity.

The fragment has an overall dark grey/black patina with a small patch of fresh bronze visible. Small patches of green concretion can be seen on both sides.

### **5. South Wales Type socketed axe - complete**

*Dimensions: length 116.1mm; width of blade 55.5mm; width below loop (including casting seams) 43.3mm; external mouth dimensions 51.2mm (side to side) by 44.1mm (front to back); internal mouth dimensions 34.9mm by 29.6mm; depth of socket approx. 77.1 – 82.0mm; (before conservation) 395.3g*

This is a complete ribbed socketed bronze axe with slightly divergent sides, and a slightly expanded blade. The mouth is sloped approximately 15 degrees, with the highest point being on the loop-side. The mouth moulding is relatively bulbous in form on one side, grading to a much narrower and cornice-like shape on the other indicating insufficient molten bronze was poured into the top of the mould during the casting process to fully form the axe mouth. The loop is high placed, descending from the socket rim. The body is hexagonal in cross-section with angular face edges. Three longitudinal ribs descend from the moulding on each face, the ribs converging slightly towards the lower blade end. The ribs are discontinuous in places, suggesting imperfections in the mould, possibly through re-use. The casting seams are prominent down each side but have been flattened, suggesting rapid hammering after casting. There are no casting stubs or scars visible around the mouth, by virtue of the incomplete mouth casting.

There are several signs which indicate that this axe was mis-cast. There is a linear-shaped hole (20 x 5mm) in the centre of one face, and a small circular-shaped hole (diameter c. 1.5mm) on the outer non-loop side, both of which are casting defects where the molten bronze did not completely fill the mould. There is an excess of bronze which runs diagonally across the width of one of the lower faces and joins with the casting seam on the outer loop-side, suggesting imperfections in the mould which have caused molten bronze to leak across the surface. Within the gap of the loop, there is an ovoid-shaped depression (c.9.5mm by c.5mm), possibly caused by trapped air during the casting process. There are small hollow depressions across the surface of the axe, which were likely to have been caused by trapped air bubbles in the bronze when the axe was cast. It is also possible that the axe was cast with mismatching moulds. The sides of the loop are misaligned, the mouth moulding is very different in character and profile on both sides, and the ribs converge more sharply on one face, whereas on the other they are only slightly convergent.

On one side, the axe has a dark grey patina on the upper half and a dark green blade, with uneven patches of bronze concretion. The other side has a grey green surface, with light green corrosion visible on the face edges, ribs, mouth moulding, loop, and blade edge.

### **6. South Wales Type socketed axe - complete**

*Dimensions: length 103.8mm; width of blade 51.7mm; width below loop 38.5mm; external mouth dimensions (including casting seams) 50.3mm (side to side) by 42.1mm (front to back); internal mouth dimensions 32.7mm (side to side) by 29.5mm (front to back); dimensions runner stubs (1) 9mm*

*by 3.2mm; height 1mm; (2) 8.8mm by 3.1mm; height 0.1mm; dimensions runner scars (1) 8.1mm by 1.6mm; height c.0.5mm; (2) 5.7mm by 1.2mm; height c.0.1mm; depth of socket approx. 75.5mm; weight (before conservation) 288.7g*

This is a complete ribbed socketed bronze axe with divergent and concave sides, creating a moderately expanded blade. The axe has a prominent and everted mouth moulding from which a narrow and high-placed loop descends. In plan, the mouth is sub-rectangular in plan, with a sub-square interior outline, with a hexagonal body cross-section. Three converging longitudinal ribs descend from the underside of the moulding, extending halfway down each face. Some of the ribs are discontinuous, suggesting imperfections in the mould, possibly through re-use. The casting seams are visible down each side but have been flattened, suggesting cursory hammering after casting. Two runner stubs are clearly visible on the socket rim (front-to-back) as well as two runner scars (side-to-side).

There are a couple of signs that the object was miscast. There is a step in the rim of the mouth moulding which extends for approximately a quarter of its circuit, suggesting that the mouth did not fully form during the casting process. There is a single oval-shaped hole (diameter c. 2mm) approximately halfway down one face, which is a casting defect where metal has not filled the mould completely.

The axe has an overall light grey-green patination, with patches of dark-grey on the sides and on the lower blade of one face. Small patches of bronze concretion can be seen on both sides.

#### **7. South Wales Type socketed axe – large fragment (fragments 17, 18, and 19 are enclosed in the axe socket)**

*Dimensions: surviving length (including runner stub) 101.1mm; surviving blade width 52.4mm; width below loop (below deformation) 41.1mm; thickness of mouth 6.1-7.2mm; dimensions of runner stub 7.7 by 4.1mm; height c.2mm; combined surviving weight (with fragments 17, 18 and 20) (before conservation) 240.3g*

This is a 75% complete fragment of a bronze socketed axe which is missing three-quarters of its mouth and upper face. The sides are gradually divergent with a concave profile, widening at the blade-end which is damaged on the loop-side. The axe has a sub-rectangular cross-section with sub-angular face edges. Roughly a quarter of the mouth survives on the loop-side, but enough survives to indicate that this axe had a pronounced, narrow, and everted mouth moulding. A single runner stub is visible along the rim of the mouth, located directly above the loop. A high-placed and narrow loop descends from the mouth moulding. Three prominent and parallel ribs extend approximately halfway down each face. The horizontal break across the upper body has removed all but the lower short sections of most of the ribs, however on one face, a surviving outer rib descends from the collar down the upper face of the axe. The casting seams are visible but have been blunted, suggesting preparation for use. There are vertical striations visible on the lower blade bevel on one face, suggesting the axe was sharpened for use.

The axe has been deliberately damaged in antiquity, and there are three bronze fragments (Nos. 17, 18, & 19) enclosed within the socket which prevent an accurate weight for this object. The break edges are uneven and soil covered, indicating that the axe was broken before burial. The upper body break edges are bent inwards, closing the socket aperture of the

axe with the three bronze fragments wedged inside, suggesting repeated hammering when the object was cold.

The axe has an overall grey-green patina. Very small patches of dark grey patina are visible on the lower blade and the loop side. Small and localised patches of bronze concretion can be seen on the lower blade and around the mouth.

#### **8. South Wales Type Variant socketed axe - complete**

*Dimensions: length 102.5mm; width of blade 53.5mm; width below loop 40.4mm; external mouth dimensions 48.7mm (side to side) by 44.2mm (front to back); internal mouth dimensions 33.6mm (side to side) by 31.5mm (front to back); depth of socket approx. 68.8mm; weight (before conservation) 408.1g*

This is a complete ribbed socketed bronze axe with slightly divergent and concave sides and a moderately expanded, curved blade edge. The axe has a hexagonal shape in cross-section, but the non-loop side has flatter facets which also give a sub-rectangular impression. The axe has a prominent and relatively deep collar, which in profile appears slightly everted. The depth of the collar varies, ranging from 11.2mm on one face to 7.2mm on the non-loop side. In profile, the rim of the mouth has a convex profile. The exterior outline of the mouth is sub-rectangular, with a sub-circular interior. The mouth surface shows no evidence of runner stubs or scars, suggesting careful filing down of any excess around the rim top. The loop is high-placed and of modest width, descending from the base of the mouth moulding. Three longitudinal and parallel ribs descend from the underside of the mouth moulding on each face. On one face, the longitudinal ribs are prominent and extend two thirds of the way, whereas on the opposing face they are poorly defined and extend approximately halfway down, suggesting repeated use of one half of the mould pair. Raised face edges on both sides give the impression of outer fourth and fifth ribs on each face. The casting seams are visible but have been carefully removed along the lower sides, suggesting preparation for use. Very fine striations run parallel to the blade on one face, indicating that the axe was further prepared for use.

The axe has a dark grey patina on the mouth and upper end on one side with a mid-green blade, grading to a grey green on the other side. Patches of localised concretion can be seen on both faces, but they occur much more frequently on the face with a dark grey patinated surface.

#### **9. South Wales Type Variant socketed axe - complete**

*Dimensions: length (including casting stubs) 83.9mm; blade width 40.1mm; width below loop (including flashes) 36.3mm; external mouth dimensions (including flashes) 44.4mm (side to side) by 34.2mm (front to back); internal mouth dimensions 29.3mm (side to side) by 21.1mm (front to back); dimensions runner stubs (1) 11.9 by 5.4mm; height c.3mm; (2) 7.9 by 3.4mm; height c.3mm; (3) 8.1 by 3.4mm; height c.2mm; (4) 9.7 by 2.1mm; height c.5mm; depth of socket (excluding casting stubs) approx.57.5mm ; weight (before conservation) 143.7g*

This is a complete ribbed socketed bronze axe, with straight and very slightly-divergent sides and an unexpanded straight blade edge. The axe has a prominent, very thin, and everted mouth moulding. The loop is narrow and high-placed, descending from the mouth moulding. The exterior and interior plan of the mouth is rectangular, with the remains of four very



prominent runner stubs placed 90 degrees apart around the sides of the mouth. Two prominent and parallel longitudinal ribs descend from the underside of the mouth moulding, extending two-thirds of the way down each face. Three of the four total ribs, are discontinuous, which suggests that there were imperfections in the mould, possibly through re-use.

It is apparent that this axe was never prepared or used, and is in its as-cast state. The casting seams are very prominent and have sharp jagged edges, and the gap in the loop is narrow and irregularly shaped. The blade edge was never sharpened or hammered, and there is casting excess around the mouth top which was never hammered or removed. The axe was also mis-cast, with two holes in the lower body of one face caused by the metal not filling the mould completely. One of these holes is a diagonally aligned sub-rectangular shaped hole (7.4 by 4.4mm) whereas the other hole, which is 2mm away, is V-shaped (approx. 4.7 by 4.5mm). Within the socket on the upper body side on one face, there is an elongate curvilinear depression (approx. 15mm by 4mm), or thinning of the socket wall, which is a casting flaw.

The axe has an overall grey-green patina on one face and dark grey patina on the other face, with a patch of fresh bronze visible around the two miscast holes. Patches of bronze concretion can be seen on the lower blade surfaces.

#### **10. South Wales Type Variant socketed axe – large fragment**

*Dimensions: surviving length 73.3mm; blade width 41.2mm; width below loop 31.9mm; surviving external mouth dimensions 38.5mm (side to side); surviving internal mouth dimensions 28.5mm (side to side); dimensions runner stubs (1) 6.0 by 3.5mm, height 1.0mm; (2) 6.8 by 3.3mm, height 1mm; surviving depth of socket approx. 57.6mm; surviving weight (before conservation) 97.3g*

This is a 75% complete fragment of a ribbed socketed bronze axe which is missing approximately half of the mouth and half of one upper face. The axe has a hexagonal cross-section, with parallel and slightly divergent straight sides which expand to a widened and curved blade end. The mouth moulding is narrow and pronounced, from which a narrow loop descends. Roughly half of the mouth survives, indicating that the mouth would have been sub-rectangular in plan. The remains of two runner stubs, placed 90 degrees apart around the surviving sides of the mouth, suggest that the axe was cast with four-runner technology. Three well-defined, longitudinal and parallel ribs descend from the mouth moulding on each face, extending a little over halfway down the length of the axe faces. Raised face edges on each side provide the impression of outer fourth and fifth ribs on each face. The casting seams are visible but have been blunted.

The mouth moulding is less pronounced towards the non-loop side, suggesting that not enough molten bronze was used in the casting process. The break edges are irregular and soil-covered, indicating that the axe was damaged prior to burial. In plan, the mouth on the non-loop sides is noticeably thinner towards the break edge and the collar is less pronounced and well-formed, suggesting a flaw during casting.

The axe has an overall grey-green to light grey-green patina, with a patch of dark grey patina on the loop-side.

### **11. Breiddin Type/Southern English B4/Welby Type – complete**

*Dimensions: length (including runner stub) 99.0mm; length (excluding runner stub) 97.9mm; blade width 50.6mm; width below loop 31.9mm; external mouth dimensions (including casting seams) 41.7mm (side to side) by 42mm; 29.5mm (side to side) by 28.5mm (front to back); dimensions of runner stub (face) 8.2 by 5.1mm; height 2mm; depth of socket approx. 76.4mm; weight (before conservation) 252.1g*

This is a complete ribbed socketed axe of bronze, with straight and slightly divergent sides and an expanded, rounded and recurving blade edge. The axe has a sub-rectangular sectioned body with slightly raised face edges and a sub-square mouth in plan (i.e., a deep front-back socket). The mouth moulding is swollen and everted, with a deep collar with a finer horizontal moulding on its lower margin. A wide loop descends from this lower moulding. A single runner stub is visible around the rim of the mouth, positioned centrally along one of the faces. The mouth rim is not quite fully formed in one corner on the loop-side and adjacent to the runner stub, suggesting that not enough bronze was used during the casting process. Three longitudinal ribs descend from the underside of the lower mouth moulding. The ribs are parallel on one face, but on the other they are slightly divergent. The casting seams are visible but have been hammered and filed flat. The upper blade bevels are slightly depressed in surface profile but there are no visible hammer facets. The blade edge is less pronounced and splayed towards the non-loop side, suggesting that the axe was worn unevenly.

The axe has an overall green patina on one face. On the other side, the lower blade surfaces are grey-green with patches of black patina on the upper body and around the collar zone. There are occasional patches of bronze concretion on both faces.

### **12. Croxton Type/ Class B Southern English – complete**

*Dimensions: length 112.4mm; blade width 63.4mm; width below loop 36.7mm; external mouth dimensions (including casting seams) 47.9mm (side to side) by 45.5mm (front to back); internal mouth dimensions 33.7mm (side to side) by 30.8mm (front to back); depth of socket approx. 88.9mm; weight (before conservation) 297.0g*

This is a complete ribbed socketed axe of bronze, with divergent and concave sides and a greatly expanded and recurving rounded blade edge. The axe is sub-rectangular in cross section with sub-angular edges. The axe has a flared trumpet shaped mouth and a wide onset collar band. The axe has a relatively deep front-to-back mouth, which is sub-square in plan with rounded corners. The top of the mouth surface is flat with no signs of any runner stubs or scars. A high placed loop of modest thickness descends from the middle of the collar band. Two parallel ribs descend from the base of the collar band, extending approximately halfway down each face. Slightly raised face edges on each side give the impression of third and fourth ribs on the face margins. The casting seams are still prominent and visible but have been hammered down on each side. The blade edge has been worn unevenly, suggesting that the edge on the non-loop side was used more often during the object's use-life. On the non-loop side, there is a linear groove running beside the casting seam, suggesting an imperfection in the shaping of the mould. On the loop side, there is a longitudinal crack in the metal extending from the socket rim to just below the collar band (c. 18mm in length), suggesting that the axe may have broken during use.

The axe has an overall dark-grey patina, merging to a green patina on the blade ends. The surface of the axe is unevenly covered with patches of green concretion.

### **13. Class D Faceted Axe/Type Meldreth, Variant Aylsham – near complete**

*Dimensions: surviving length 109.3mm; surviving blade width 46.5mm; width below loop 26.4mm; external mouth dimensions 34.5mm (side to side) 31.9mm (front to back); internal mouth dimensions 23.5mm (side to side) by 23.2mm (front to back); depth of socket approx. 77.5mm; surviving weight (before conservation) 155.9g*

This is a slender socketed axe of bronze with divergent and concave sides and a moderately expanded, damaged, blade. It has a flared trumpet shaped mouth with a flat rim and a sub-circular shaped mouth. Slight traces of two filed down runner stubs are evident on the loop and non-loop side. The axe has a deep collar band whose lower margin is defined by a prominent moulding. A low-placed and thick loop descends from this lower collar moulding. The axe has ten subtle facets which start below the collar moulding and follow the shape of the axe. The casting seams are visible but have been blunted through hammering and possibly filed down towards the blade end. On one of the faces, there is a shallow depression on the upper blade bevel but no obvious sign of any hammer facets. The blade edge is damaged on the non-loop side and is soil-covered, indicating that the damage was probably caused in antiquity.

The axe has a dark grey patina across most upper surfaces, with green patinated lower blade faces. Localised patches of bronze concretion can be seen on the blade surfaces and along the non-loop side. The edges of the mouth and lower collar moulding have a light green powdery surface.

### **14. Plain Socketed axe – complete**

*Dimensions: length 72.1mm; blade width 43.7mm; width below loop 29.5mm; external mouth dimensions 34.9mm (side to side) by 35.1mm (front to back); internal mouth dimensions 25.8mm (side to side) by 25.8mm (front to back); depth of socket approx. 55.8mm; weight (before conservation) 132.2g*

This is a complete plain socketed axe of bronze with straight and slightly divergent sides and a moderately expanded blade with a crescentic and recurving blade edge. The axe is sub-rounded in section with well-rounded face edges, and a sub-square (i.e., deep front-to-back) shaped mouth with rounded corners. The axe has a flared mouth with a bevelled rim. The mouth has no defined collar. The loop is of moderate thickness and descends from below the flared mouth. The casting seams have been hammered or filed down and is more visible on the non-loop side. Striations run parallel with the blade edge, indicating that the blade was sharpened for use.

The axe has a grey green patina on one face, grading to a dark green coloured surface on the other. There are patches of green concretion across most of the surfaces.

### **15. Plain Slender Socketed axe – complete**

*Dimensions: length 66.5mm; surviving blade width 34.4mm; width below loop (including casting seams) 29.9mm; external mouth dimensions 34mm (side to side) by 23mm (front to back); internal*

*mouth dimensions 23.4mm (side to side) by 17.3mm (front to back); depth of socket approx. 40.5mm; surviving weight (before conservation) 100.6g*

This is a complete plain socketed axe of bronze with straight and near-parallel sides, and a very slightly expanded blade with straight blade edge. The axe has a narrow rectangular shaped body and mouth, with a flared collar which is defined by a faint step where it meets the body of the axe. There is some damage to the mouth rim on one side. A relatively low set and narrow loop descends from just below the collar. The casting seams down each side are visible and moderately prominent but have been rapidly hammer rounded. On one face, just below the collar, there is a small circular hole (diameter 2.7mm) which suggests a casting defect where the metal has not filled the mould completely. On the same side, a small amount of protruding excess (c. 3 by 3mm; height 1mm) can be seen within the socket on the upper socket wall. The straight but asymmetric blade edge has been worn unevenly, suggesting that the edge on the non-loop side was used more often during the object's use-life.

The axe has an overall grey-green patina, with light green powdery surfaces across the blade edge, loop edges, and mouth. On the upper surface of one face is a small scratch which has scratched away the patina and was likely caused during retrieval. There are two localised patches of prominent green concretion on one face.

#### **16. Ribbed socketed axe – large body and blade fragment**

*Dimensions: surviving length 60.3mm; surviving blade width 53.9mm; width at upper break 45.2mm; thickness at break 15-13.6mm; surviving weight (before conservation) 168.5g*

This is a blade-end and middle to lower body fragment of a ribbed socketed axe of bronze. Near the blade edge, the sides flare out with concave curves to provide a moderately expanded blade edge. The ends of three parallel ribs can be seen on both faces, with one outer rib possibly being discontinuous in form. The casting seams have been hammered flat and are only slightly visible on one side. The axe has fragmented unevenly across the upper break and has been distorted inwards so that the base of the socket is largely enclosed, suggesting repeated hammering after the object was broken. There is a short vertical tear in the axe wall on one side, near the casting seam. On one face, there are two small round impact depressions, suggesting additional impact in antiquity with a small round ended implement like a socketed awl. Approximately one third of the blade edge is missing and there is a short section where the blade-edge bulges, suggesting that the damage to the blade was not entirely caused through use and that the blade was deliberately struck with a blunt tool. The breaks are within the patinated surface and soil covered, suggesting that the damage was inflicted in antiquity.

The fragment has a dark green patina. Patches of bronze concretion are visible across both sides. Light green powdery surfaces can be seen along the upper break edges.

#### **17. Copper alloy sheet fragment (associated with socketed axe 7)**

*Dimensions: surviving length (visible from X-ray) approx. 47.7mm; surviving width approx. 9.7mm; surviving thickness 1.6 mm; combined surviving weight (with axe No. 7 and fragments 18 and 19) (before conservation) 240.3g*

This is small plain bronze sheet fragment securely wedged and enclosed inside the socket of axe No. 7. In relation to the other fragments, this object is closest to the loop-side. The fragment is C-shaped in section and the longitudinal edges appear to be original, suggesting that the object was initially flat and then shaped into a curved cross-section. The upper break edge has a slightly uneven surface. The rest of the object is obscured within the socket of the axe, but an X-ray confirmed that the fragment has a curvature which suggests that it was from an object with a penannular circular or C-shaped object, in plan view. The visible break is worn and soil covered, indicating damage during antiquity.

The fragment has a green patination.

#### **18. Copper alloy sheet fragment – (associated with socketed axe 7)**

*Dimensions: surviving length (visible from X-ray) approx. 31.9mm; surviving width approx. 12.1mm; surviving thickness 0.5mm; combined surviving weight (with axe No. 7 and fragments 17 and 19) (before conservation) 240.3g*

This is a small plain bronze sheet fragment securely wedged and enclosed inside the socket of axe No. 7. In relation to the other fragments, this object is the central of the three. The fragment is rectangular in plan with a slight convex cross-section. Most of the edges appear to be original, but one of the corners is missing and some damage might have occurred post-deposition.

The fragment has a green patination with a small patch of light green corrosion on the original upper edge.

#### **19. Copper alloy bracelet terminal fragment (associated with socketed axe 7)**

*Dimensions: surviving length (visible from X-ray) – at least 18.8mm; maximum width approx. 9.9mm; surviving thickness 2.8mm; combined surviving weight (with axe No. 7 and fragments 17 and 18) (before conservation) 240.3g*

This is a small plain bronze fragment securely wedged and enclosed inside the socket of axe No. 7. In relation to the other fragments, this object is located closest to the non-loop side. In plan view, the fragment is curvilinear. The fragment is C-shaped in cross section, with a convex outer surface and concave interior surface which is obscured by corrosion. The width of the fragment tapers slightly towards the exposed terminal. The fragment has an everted terminal, with a relatively flat end surface. The edges are well-eroded and appear to be original.

The fragment has a green patinated surface with light green powdery surfaces along the edges of the everted terminal.

#### **20. Casting jet – single runner form – incomplete**

*Dimensions: surviving top surface length 33.3mm; max. top surface width 20.3mm; max height 15.3mm; surviving runner dimensions 13.1 by 3.4mm; height 3.0mm; surviving weight (before conservation) 27.1g*

This is a quarter-circle shaped bronze jet with the remains of a single runner extending from the pouring reservoir. The upper surface is largely level, but with a rough and uneven surface,

created by cooling on contact with the air. The remains of the runner suggests that the metal was poured into a mould with a long and thin conical opening. The upper surface has fragmented across both ends but the breaks are within the patinated surface and soil covered, indicating that it was damaged in antiquity.

The jet is covered in a grey green patina, with a dark grey upper surface. The edges of the jet and the remains of the runner are covered in a light green powdery surface.

### **5.0 Identification & Discussion (CG & AG)**

The complete spearhead (No. 1 *above*) may be identified as a Plain Pegged socketed spearhead with a Flame-shaped blade of Group 11, Type 11A (Davis 2015, 44-94). They span the end of the Middle Bronze Age to the Earliest Iron Age (1300-600 BC), but are most common in hoards belonging to the Ewart Park phase of the Late Bronze Age, spanning the tenth and ninth centuries BC (Davis 2015, 94). In Wales, early examples of similar Plain Pegged socketed spearheads are found in the Penard, Guilsfield and Princetown hoards, the first dating to 1300-1150BC and the second and third dating to 1020-920BC (Barnwell 1864; Savory 1965; 1972; 1980, 117-19, Cats. 266, 268 & 272; Figs. 32-8 & 40). There are eighteen other known hoards of Ewart Park date (1000-800 BC) from Wales which include Plain Pegged spearhead associations: the Tŷ Mawr (Anglesey), Llandderfel (Gwynedd), Llantysilio (Denbighshire), Llanharan (Rhondda Cynon Taf), Pant-y-Maen, Manorbier (both Pembrokeshire), Llantwit Major, Cowbridge, Penllyn, (all Vale of Glamorgan), St Ishmael (Carmarthenshire), St Fagans (Cardiff), Llantarnam, Trevethin, (both Torfaen), Llangwm, Glascoed, Llantilio Crossenny, Llanvihangel Gobion, and Grosmont (all Monmouthshire) hoards (Barnwell 1864; Williams 1877; Davies 1929, 368; Griffiths 1957; Burgess *et al* 1972, 240; Savory 1980, 120-1, Cats. 273 & 281; Gwilt 2004, 132-4, Appendix 1, Nos. 1, 3 & 9; Lynch 1991, 246-9 & Fig. 69; Gwilt & Lodwick 2002; 2012; 2016; Gwilt *et al* 2011; 2012; 2015a; 2015b; 2016a; 2016b; 2018; Northover unpublished, H4, 53, 74, 85, 108, 121, 141). The wooden hafts of a number of Plain Pegged spearheads in England have also been radiocarbon dated to the Ewart Park period of the Late Bronze Age dating to between 1000 BC and 800 BC (Needham 1996, 136-7 & Fig. 3; Needham *et al* 1997, 93-8).

The lower blade fragment of a spearhead (No. 2 *above*) is difficult to identify owing to its fragmentary and deformed nature. Although it has been distorted through repeated hammering, the lack of a midrib precludes many recognised types. The observation that this fragment has a bevelled edge also discounts the possibility that this fragment belongs to a spearhead with a Barbed Blade of Group 15 (Davis 2015, 181). It is more likely that this fragment belongs to a spearhead with a Hollow Blade of Davis' Group 12 (Davis 2015, 152-162, Nos. 1077-1148, Pls. 98-104) the wide internal hollow aperture providing good evidence to support this assertion. Group 12 spearheads have been found in several hoards spanning the Late Bronze Age, but they largely correlate with the Wilburton and Blackmoor phases of the Late Bronze Age, spanning the late twelfth to late tenth centuries BC (Davis 2015, 162). In Wales, the Guilsfield, Powys, hoard is the only example where Group 12 spearheads are found associated with other artefacts, and this dates to the Blackmoor phase (1020-920 BC) (Savory 1965; 1972; 1980, 117-19, Cats. 266, 268 & 272; Figs. 32-8 & 40). Outside of Wales, Group 12 spearheads are also primarily found in Wilburton and Blackmoor phase hoards from Wilburton, Isleham and Bradley Fen (all Cambridgeshire). Radiocarbon dating has been carried out on two spearheads from the Wilburton and Bradley Fen hoards,

providing a date of 1260-940 BC and 1190-930 BC, respectively (Davis 2015, 162). A fragment of a Group 12 spearhead was also found in the Gorleston-on-Sea, Norfolk, hoard which dates to the Ewart Park phase (920-800 BC), and so it is possible that usage of these spearheads might have continued at a low level throughout the latter stages of the Late Bronze Age (Davis 2015, 162). It is also possible that this spearhead fragment represents an old object that continued to circulate as an object, or perhaps as a piece of scrap metal, until the Ewart Park phase.

Two of the artefact fragments (Nos. 3 & 4) from within this reported hoard can be identified as tubular spear-ferrules. Based on their different patinated surfaces and the lack of a join between them, the two fragments appear to belong to two separate artefacts, as opposed to deriving from the same object. Ferrules of a long and tubular form have been described as dating to the Wilburton and Blackmoor phase of the Late Bronze Age (1150-920), whereas those of a shorter form are more characteristic of the Ewart Park phase (1000-800 BC) (Burgess *et al* 1972, 216; Needham 1990, 58). The highly fragmented and distorted nature of the two artefacts means that they lack any further diagnostic features which might allow further identification (Burgess *et al* 1972, 216), although the evidence for two opposing rivet holes on one (No. 4, *above*) is a typical feature of ferrules. Spear-ferrules are relatively rare finds from Wales, but they have been found associated within weapon dominated hoards belonging to the Broadward metalworking tradition spanning the Late Bronze Age. As well as the slightly earlier Guilsfield, Powys, which dates to the Blackmoor phase (1020-920 BC), spear ferrules also appear in the Pant-y-Maen, Pembrokeshire weapon hoard, which is dated to the Ewart Park phase (1000-800 BC) and contemporary with the Llanddeusant hoard (Griffiths 1957; Savory 1965; 1972; 1980, 117-19, Cats. 266, 268 & 272; Figs. 32-8 & 40; Burgess *et al* 1972, 240).

Six of the socketed axes in this reported group (Nos. 5 -10, *above*) may be identified as South Wales Type socketed axes or Variant forms. The combination of narrow and out-splayed mouths, high placed and ephemeral loops, blocky rectangular or hexagonal form, three ribs descending from the underside of the collars, and evidence for being cast with four-runner technology are all diagnostic elements which, in combination, help to identify this type (e.g. Needham 1981, 31; Northover *unpublished*, 259-60; Burgess 2012, 239 & Fig. 1). South Wales Type socketed axes and their Variant forms are a frequent and dominating element within Ewart Park hoards of Late Bronze Age date across south-east Wales (e.g., McNeil 1973, Fig. 9; Moore 1978; Savory 1980, 49, 120-2; Needham 1981; Gwilt 2004). Here, around fifty hoards now contain approaching 250 examples, making it the core area within Britain for their burial within hoards. Over fifty single finds of South Wales Type socketed axes have also been discovered in south-east Wales. They are also frequent smaller presences in contemporary hoards across mid and north-east Wales, south-western England, southern England, and northern France, with occasional outliers in northern Britain and Ireland (McNeil 1973, 61-4; Moore 1978; Needham 1981, 55-66; Burgess 2012, 241-4 & Fig. 2).

The Breiddin Type socketed axe (No. 11, *above*), with its swollen mouth and ribs descending from a lower horizontal moulding, broadly equates with Southern English Ribbed axes and Type Welby axes in northern Britain (Schmidt & Burgess 1981, 221-3; Needham 1990, 32-9). They are uncommon elements of hoards in south-east Wales, although single examples have been found in recently discovered hoards from Cowbridge, Colwinston and Llancarfan

(all Vale of Glamorgan) (Gwilt & Lodwick 2002; 2014; Gwilt *et al.* 2013). They take their name from an example discovered during excavations at The Breiddin hillfort in Powys (Coombs 1990, 133 & 6, Fig. 56). Wood surviving in the socket of this axe was radiocarbon dated, providing a date of 2704±50bp, calibrating to 908-814 BC at 1 sigma (Musson 1990, 176 & 195, Table 6). Breiddin Type axes are most common in north and east Wales and The Marches (Coombs 1990, 133; Northover *unpublished*, 253) with examples found within hoards from Plas yn Cefn and Ruabon, Denbighshire, Cherrytree Bank, Powys and Congleton, Cheshire (Davies 1929, 68 & 397; Burgess *et al* 1972, 236 & 267, Fig. 26; Clwyd-Powys Archaeological Trust 1977; Savory 1980, 123, Cat. 286 & Fig. 44; Northover *unpublished*, hoards 41, 48, 55 & 139).

One complete socketed axe (No. 12, *above*) may be identified as of Croxton Type, also known as a particular form of Class B - Southern English ribbed axes (Northover *unpublished*, 267; Needham 1990, 32-8). The Croxton type, with its diagnostic flaring trumpet mouth, deep collar band and ribs is so named after a defining example found in Cheshire, within a wider frequency observed along the Welsh Marches (Northover *unpublished*, 267). It is one form within a wider variety of Class B ribbed axes, found in hoards and as single finds across southern Britain. They are almost always found within hoards dating to the Ewart Park phase (1000-800 BC) of the Late Bronze Age (Needham 1996; Needham *et al* 1997). Croxton Type socketed axes have been found in increasing numbers of hoards across south-east Wales in recent years, with examples in the Pendoylan, Llantwit Major, Wick Community, Tal-y-garn 1, Colwinston Community, and Llanccarfan Community (all Vale of Glamorgan) hoards, as well as an additional example from the St Arvans (Monmouthshire) hoard (Storrie 1887; Fox 1926; GGAT 1977-8; Metcalf & Lambert 1979; Savory 1980, Cats. 280 & 281; 1984, 441b; Northover *unpublished*, H79 & H124; Gwilt 2004, Appendix 1, Cat. 10; Gwilt & Lodwick 2003; 2005; 2014; Lodwick & Gwilt 2007; Gwilt *et al* 2013).

The slender and faceted bronze socketed axe (No. 13, *above*) may be identified as of Type Meldreth or Class D faceted axe, which have a variety of sub-types, dependent upon the shape and depth of their collar and mouth shape (Schmidt & Burgess 1981, 204-11; Needham 1990, 41-3). The axe from this reported group may be identified as a Variant Aylsham based on the presence of a horizontal moulding at the base of a trumpet-shaped mouth, in place of the collar step of the Type Meldreth itself (Schmidt & Burgess 1981, 206-7). Nearly all of the known hoard associations containing Type Meldreth or Class D axes are securely Late Bronze Age in date (1150-800 BC). A few examples have been found in earlier hoards belonging to the Wilburton phase of the Late Bronze Age dating to 1150-1000 BC, however most hoard associations may be dated to the succeeding Ewart Park phase dating to 1000-800 BC (Schmidt & Burgess 1981, 210-1; Needham 1990, 43; Eogan 2000, 61). This type is generally regarded as a British type, but they do occur in Ireland and France. In Wales, near 40 examples of slender faceted axes of Meldreth or Class D type are now known, mostly from south-east Wales. Examples of these axes have been found in recently reported hoards from Llanfrynach Community (Powys), Grosmont Community (Monmouthshire), Llanharan Community (Rhondda Cynon Taf), and Llanfihangel Cwmddu with Bwlch & Cathedine Community (Powys), all belonging to the Ewart Park phase of the Late Bronze Age (Gwilt *et al* 2016c; 2018a; 2018b; Knight *et al* 2018).



The complete, small, plain, and waisted socketed axe (No. 14, *above*) is difficult to identify to a widespread type. The combination of a plain decoration, a simple and flared mouth with a bevelled rim, concave sides, and the positioning of the loop below the rim, are all features consistent with Class 11A axes/Type Portree, Variant Alford axes (Schmidt & Burgess 1981, 188-9, Cats. 1075-93; Eogan 2000, 86-122, Cats. 640-1113C). Whilst the Llanddeusant example does share many of the Class 11A characteristics, it lacks the typical wide and baggy form of these axes. There are however some examples of more slender and waisted Irish axes of this type, and the length and blade width of this example are consistent with the range of dimensions of other Class 11A (Eogan 2000, 87-122, c.f., Nos. 712, 713). All axes of Class 11/Type Portree, Variant Alford can be assigned to the Ewart Park (Dowris) phase of the Late Bronze Age (1000-800 BC). Close parallels for this axe are difficult to find from Wales, but a plain socketed axe of similar form was found within a hoard from Llantwit Major, Vale of Glamorgan, which is dated to the Ewart Park phase of the Late Bronze Age (Savory 1980, 121, No. 281, Fig. 42).

The small, plain, and slender socketed axe with a flared and onset collar (No. 15 *above*) is also difficult to identify to a widespread type, where the absence of a lower mouth moulding indicates that it is not of Class A – South-eastern type (e.g., Needham 1990, 28-31). Although it shares some similarities with Class 2A and Type Wallington socketed axes, it lacks the straight collar form of these axes. Close parallels for this axe are difficult to find from Wales, but a plain socketed axe of similar form was found in a hoard from Pendoylan (Vale of Glamorgan) along with one other plain socketed axe and four ribbed socketed axes of South Wales Type (GGAT 1977-8, 31-2; Green 1985, 276-80 Fig. 5 & Pl. 5; Northover *unpublished*, 209-210, Hoard Cat. H79 & 641). This hoard is dated to the Ewart Park phase of the Late Bronze Age (1000-800 BC). Plain slender socketed axes of slightly different forms are now known from numerous Late Bronze Age hoards in Wales, including the Freshwater West (Pembrokeshire), Margam (Neath Port Talbot) and Myddfai (Carmarthenshire) hoards (Briggs & Williams 1995, 46 & Fig 4.1; Northover *unpublished* H. 38, 76, & 140; Wear *unpublished*).

The socketed axe blade fragment (No. 16, *above*) belonged to a ribbed socketed axe, however this blade end fragment is not diagnostic to precise type. Various forms of ribbed axes are common components of hoards from south-east Wales and belonging to the Ewart Park phase of the Late Bronze Age (1000-800 BC). As discussed above, ribbed axes of South Wales Type and their Variant forms are a frequent and dominating element within Ewart Park hoards of Late Bronze Age date across south-east Wales (e.g., McNeil 1973, Fig. 9; Moore 1978; Savory 1980, 49, 120-2; Needham 1981; Gwilt 2004). In addition, ribbed socketed axes, variously known as Southern English/Welby Type ribbed axes, Yorkshire Type axes, Croxton Type axes, Breiddin Type axes and Llanarth Type axes have been found beside South Wales type axes in several hoards of Ewart Park date from south-east Wales (e.g., Storrie 1887; Metcalf & Lambert 1979; Savory 1980, 120-1, Cats. 273, 280, 281; Gwilt 2004, 132-4, Appendix 1.1, 1.3, 1.10; Gwilt & Lodwick 2002; 2004; 2006; Gwilt *et al.* 2013; Lodwick & Gwilt 2007; Northover *unpublished*, Hoards 74, 79, 85, 124). Therefore, the presence of this blade-end fragment is entirely consistent with a Late Bronze Age hoard association from this region.

Two of the fragments (Nos. 17 & 18 *above*) which are enclosed within the socket of a South Wales Type axe are problematic to identify to a known class of finished artefact of Bronze Age date. One of the fragments (No. 17) has a more curvilinear form and a 'c'-shaped section, and so it could possibly have once formed part of the rim of a vessel or perhaps a hollow sectioned bracelet. The second fragment (No. 18) is flatter and has a less pronounced convex exterior, but it could have once belonged to a bronze vessel or belonged to a larger artefact of sheet bronze construction. Ingot, plate and sheet scrap fragments become recognised raw material components of hoards during the Late Bronze Age, particularly in hoards of the Carp's Tongue tradition which often contain an eclectic admixture of decorative pieces, ornamentation, and various pieces of sheet metalworking, and occasionally bronze vessel fragments; this often-fragmented admixture of material is sometimes referred to as *bric-a-brac* (Burgess 1968, 39). In Britain, the Carp's Tongue complex appears to be an intrusive or specialised metalworking industry which had its centre in northern and western France, appearing alongside the indigenous Ewart Park metalworking tradition (Burgess 1968, 38-9). Although it is impossible to assign the bronze sheet fragments to any known finished object with any degree of certainty, their presence within this hoard is entirely consistent with an Ewart Park date (1000-800 BC).

One fragment (No. 19 *above*) is different from the other enclosed artefacts (Nos. 17 & 18) as it is noticeably thicker, has a c-shaped section, and possesses an everted terminal. It is likely that this fragment was once part of a 'C' sectioned bracelet, and within Davies' (2012) reassessment of Late Bronze Age ornaments it can be considered a Type 4E (Outwardly Expanded Solid Terminal with 'C' shaped section). Only a few examples of this type of bracelet exist from Britain, with bronze examples found in Carp's Tongue hoards from Petters Sports Field, Surrey (Needham 1990, 62), Leigh II, Kent (Turner 1998, vol II, 137, fig. 55), Minnis Bay, Kent (Turner 1998, vol III, 105, fig. 49, no. 19/52), and a gold example from Bexley, Kent (Hook & Needham 1989, 16, No. 5). Although they possess similar morphological traits, the four bronze bracelets are quite varied in terms of the presence of decoration, type of decoration, the thickness of the bar, and the degree to which the edges enclose the internal gap. The bracelet fragment from the Leigh II (Kent) hoard is the closest in form to the example from this reported group, but it is decorated with lateral ribs around the surviving terminal (Turner 1998, vol II, 137, fig. 56). Although the Llanddeusant fragment is plain, the majority of it is hidden within the socket of the axe and so there is the possibility that decorative elements might be found on those sections of the object which are obscured within the socket of the axe. In terms of overall style, the undecorated Llanddeusant bracelet is closer paralleled with the C-sectioned bracelets found in Carp's Tongue hoards from western France (Coffyn, Gomez and Mohen 1981, 134-9, Pl. 30-32), suggesting that the object was made in France and evidence for inter-regional exchange between west Wales and western France. C-sectioned bronze bracelets are not considered a diagnostic element of the Carp's Tongue complex (Burgess 1968, 38-9; Matthews 2013, 57-9; Brandherm & Moskal-del-Hoyo 2014, footnote 60), but their presence and association as components within these hoards suggests a date within the ninth century BC and contemporary with the Ewart Park phase of the Late Bronze Age (1000-800 BC).

The jet of one-runner form (No. 20, *above*) is the excess reservoir of metal at the top of a mould and a bi-product of the casting process. Jets are commonly incorporated into hoards during the Late Bronze Age yet are rarely present within hoards of Early and Middle Bronze

Age date. There are numerous Ewart Park hoards from south and west Wales which have jets as components within them, where examples with between one and four runners are known (e.g., Storrie 1887; Savory 1980, 120-2, Cats. 274, 281 & 284, Figs. 31, 42 & 43; Gwilt 2004, 132-4, Appendix 1, Nos. 3 & 4; Gwilt & Lodwick 2018; Northover *unpublished*, H 23, 74, 78, 125).

In combination, all of the artefacts included in this hoard can be confidently dated to the Late Bronze Age (1150-800 BC) (Needham 1996, Needham *et al* 1997). The majority of the artefacts retain chronologically diagnostic features, and the overall composition and character of the hoard indicates that it was deposited during the Ewart Park phase (1000-800 BC). The Group 12 spearhead is slightly earlier in manufacture and largely belongs to the Wilburton and Blackmoor phases of the Late Bronze Age (1150-920 BC), but later examples have been found in hoards of Ewart Park date and so its presence does not present a dating problem.

The account of discovery indicates that the objects were found buried together and located at depths of 5-33cm (2-13 inches) beneath the surface. A series of photographs taken whilst the artefacts were being removed from the ground confirms the closeness of direct association of these contemporary objects, dating to the tenth and ninth centuries BC. Hand-excavation of a test-pit over the location of the rediscovered find-spot indicated that the recent metal detector pit, created when the artefacts were removed from the ground, had removed most evidence of the original burial context. No further bronze artefact finds were discovered during the investigation, although small quantities of in-situ copper alloy staining were observed in the natural silty clay soil, confirming the place of the buried hoard. The evidence suggests that the hoard was placed as a closed deposit of directly associated artefacts in a single small pit, the geophysical survey not having revealed positive and clear evidence for archaeological features in the immediate vicinity of the find.

A search of the Historic Environment Record (via [www.archwilio.org.uk](http://www.archwilio.org.uk)) revealed no Bronze Age features or sites in the adjacent fields. Around 1km to the south-west, the remains of two possible Bronze Age cairns (PRN 40671 & 40672) and a standing stone (PRN 40673) are known at Gorsddu Farm, while about 1.3km to the south-south-west is another possible Bronze Age cairn at Twyn Mawn (PRN 35996). Approximately 1.3km to the east-north-east are the remains of a possible Bronze Age standing stone circle Waen Lwyd (PRN 9997) and a round barrow at Cwmothlwn (PRN 5462). These are all likely to date to the Early Bronze Age (2200-1500 BC) or earlier, rather than contemporary with this Late Bronze Age hoard.

It is of interest that this hoard was carefully buried on a steep south-western facing slope, which also functions as a spur of land at the confluence of two streams whose sources are springs draining off the southern side of Mynydd y Llan, approximately 230 and 460m to the north-north-east. Approximately 50m to the south-south-west, this watercourse merges with Nant y Creigiau, before joining with the Afon Sawdde, approximately 440m to the south-west, which is a tributary of the Afon Tywi. This specific watery landscape locality may have been deliberately selected for the deposition of the hoard as a gift to the gods (Gwilt 2004, 121; Gwilt *et al* 2013, 11). This is an emerging and often repeated pattern of landscape location selected for Late Bronze Age hoards across Wales (Gwilt 2004, 121).

## **6.0 Recommendation (AG)**

It is my opinion, that these twenty artefacts (22 fragments) may be considered as treasure within the reviewed definition of treasure (Treasure Act 1996 and Treasure (Designation) Order 2002). The grounds for arguing this are that these are contemporary base-metal artefacts of prehistoric date, which were discovered still buried together in a closed hoard association. ***Please refer to Section C, Paragraphs 6, 11 & 14 of the Treasure Act 1996 Code of Practice (2<sup>nd</sup> Revision); England & Wales (DCMS 2008, 8-12).***

## **7.0 Declaration of interest (AG)**

If declared treasure, Carmarthenshire Museum would seek to acquire this hoard of bronze artefacts for its collection. It is anticipated that any reward would be split equally between the finder and the landowner.

## **References**

- Barnwell, E.L. 1864. Bronze Implements, *Archaeologia Cambrensis* 10(3<sup>rd</sup> series), 212-31.
- Brandherm, D. & Moskal-del Hoyo, M. 2014. Both Sides Now: The Carp's Tongue Complex Revisited, *Antiquaries Journal* 94, 1-47.
- Burgess, C., 1968, 'The Later Bronze Age in the British Isles and North-Western France', *Archaeological Journal*, 125, 1-45.
- Burgess, C., Coombs, D. & Davies, D.G. 1972. The Broadward Complex and Barbed Spearheads, In F. Lynch & C. Burgess (eds.), *Prehistoric Man in Wales and the West; Essays in honour of Lily F. Chitty*, Bath: Adams & Dart, 211-83.
- Burgess C. 2012. South Welsh socketed axes and other carp's tongue conundrums, In W.J. Britnell & R.J. Silvester (eds.), *Reflections on the Past; Essays in honour of Frances Lynch*, Cambrian Archaeological Association, 237-53.
- Clwyd-Powys Archaeological Trust. 1977. 'Note: 45. Welshpool (SJ 2220 0825)', *Archaeology in Wales* 17, 23.
- Coffyn, A., Gomez, J. and Mohen, J-P. 1981. L'Apogée du bronze atlantique: Le dépôt de Vénat. Paris: Picard.
- Coombs, D.G. (1990) Bronze Objects, In C.R. Musson, 1990, 132-41.
- Davies, A. (2012) *Beyond the Horizon: Ornaments in the British Late Bronze Age and Early Iron Age*. Unpublished Masters thesis. Cardiff University.
- Davies, E. 1929. *The Prehistoric & Roman Remains of Denbighshire*, Cardiff: William Lewis.
- DCMS 2008. *The Treasure Act 1996 Code of Practice (2<sup>nd</sup> Revision); England & Wales*; London: Department for Culture, Media & Sport.
- Enright, C. 2021. *Blaenau Bronze Age Hoard*, unpublished Dyfed Archaeological Trust Report No. 2021-62, Cadw Project No. DAT 169.
- GGAT, 1977-1978. *The Glamorgan-Gwent Archaeological Trust Ltd: Annual Report*
- Green, H.S, 1985. Some Recent Finds of Bronze Age Antiquities from Wales, *Bulletin of the Board of Celtic Studies* 32(III), 275-82.
- Griffiths, W.E. 1957. The Pant-y-Maen Bronze Hoard, *Bulletin of the Board of Celtic Studies* 17(II), 118-24.
- Gwilt, A. 2004. Late Bronze Age Societies (1150-600BC); Tools and Weapons, In M. Aldhouse-Green & R. Howell (eds.), *The Gwent County History Volume I; Gwent in Prehistory and Early History*, Cardiff: University of Wales Press, 111-39.
- Gwilt, A. & Lodwick, M. 2002. *The Cowbridge Hoard*, unpublished hoard manuscript.
- Gwilt, A. & Lodwick, M. 2003. *The Tal-y-garn 1 hoard*, unpublished draft catalogue.

- Gwilt, A. & Lodwick, M. 2004. *Late Bronze Age hoard from Wick, Vale of Glamorgan (Treasure Case 04.7 Wales)*, unpublished treasure report.
- Gwilt, A. & Lodwick, M. 2005. 'Note: Wick (SS 92 72)', *Archaeology in Wales* 45, 154.
- Gwilt, A. & Lodwick, M. 2006. Archaeological Note: A Late Bronze Age Metalwork Hoard from Llancarfan, Vale of Glamorgan, *Morgannwg* 50, 186.
- Gwilt, A. & Lodwick, M. 2012. *A Late Bronze Age Hoard from Llantarnam, Torfaen (Treasure Case 11.16)*, unpublished treasure report.
- Gwilt, A. & Lodwick, M. 2014. *A Late Bronze Age hoard from Llancarfan, Vale of Glamorgan (Treasure Case 13.26)*, unpublished treasure report.
- Gwilt, A. & Lodwick, M. 2018. *A Late Bronze Age hoard from Llanover Community, Monmouthshire (Treasure Case 17.08 Wales)*, unpublished treasure report.
- Gwilt, A. & Lodwick, M. 2006. *A Late Bronze Age hoard from Llancarfan, Vale of Glamorgan (Treasure Case 05.15)*, unpublished treasure report.
- Gwilt, A. & Lodwick, M. 2016. *A second Late Bronze Age hoard from Llantilio Crossenny Community, Monmouthshire (Treasure Case 15.06)*, unpublished treasure report.
- Gwilt, A., Lodwick, M., Schlee, D. Poucher, P. & Davis, M. 2011. *A Late Bronze Age hoard from Manorbier, Pembrokeshire (Treasure Case 10.12 Wales)*, unpublished treasure report.
- Gwilt, A., Johnson, S.L., Lodwick, M. & Davis, M. 2012. *A Late Bronze Age Hoard from St Ishmael, Carmarthenshire (Treasure Case 11.10)*, unpublished treasure report.
- Gwilt, A., Lodwick, M., Sell, S. & Davis, M. 2013. *A Late Bronze Age hoard from Colwinston, Vale of Glamorgan (Treasure Case 12.07 Wales)*, unpublished treasure report.
- Gwilt, A., Lodwick, M. & Davis, M. 2015a. *A probable Late Bronze Age hoard from Penllyn, Vale of Glamorgan (Treasure Case 14.09)*, unpublished treasure report.
- Gwilt, A., Lodwick, M., Davis, M., Chapman, E. & Daly, T. 2015b. *A Late Bronze Age hoard from Trevelin, Torfaen (Treasure Case 14.24)*, unpublished treasure report.
- Gwilt, A., Lodwick, M. & Sell, S. 2016a. *A probable Late Bronze Age hoard from Llanharan Community, Rhondda Cynon Taf (Treasure Case 15.04)*, unpublished treasure report.
- Gwilt, A., Lodwick, M. & Davis, M. 2016b. *A Late Bronze Age hoard from Llantilio Crossenny, Monmouthshire; Treasure Act 1996 (Case 15.05 – Wales)*, unpublished treasure report.
- Gwilt, A., Lodwick, M. & Sell, S. 2016c. *A Late Bronze Age hoard from Llanharan Community, Rhondda Cynon Taf (Treasure Case 15.10)*, unpublished treasure report.
- Gwilt, A., Lodwick, M. & Dennis, I. 2018a. *The Llanddewi Skirrid hoard: A Late Bronze Age hoard from Grosmont Community, Monmouthshire (Treasure Case 15.07)*, unpublished treasure report.
- Gwilt, A. & Lodwick, M. 2018b. *A Late Bronze Age association from Llanfihangel Cwmdru with Bwlch & Cathedine Community, Powys (Treasure Case 18.01)*, unpublished treasure report.
- Knight, M.G. 2019. "Doubtful Associations? Assessing Bronze Age 'Multi-period' Hoards from Northern England, Scotland and Wales," in M.G. Knight, D. Boughton and R.E. Wilkinson (eds) *Objects of the Past in the Past. Investigating the significance of earlier artefacts in later contexts*. Oxford: Archaeopress (Access Archaeology): 19–41.
- Knight, M.G., Gwilt, A., Lodwick, M. & Davis, M. 2018. *A Late Bronze Age hoard from Llanfrynach Community, Powys (Treasure Case 16.18)*, unpublished treasure report.
- Lodwick, M. & Gwilt, A. 2007. '486. Wick, the Vale of Glamorgan; Late Bronze Age base-metal hoard (04.7)', *Treasure Annual Report 2004*, London: Department for Culture, Media and Sport, 200 & 319.
- Lynch, F. 1991. *Prehistoric Anglesey*, Llangefni: The Anglesey Antiquarian Society (2<sup>nd</sup> edition).
- Matthews, S., 2013, 'The Boughton Malherbe hoard, Kent: un dépôt du groupe de l'épée en langue de carpe Franc;ais en Angleterre?', *Bulletin de l'Association pour la Promotion des Recherches sur l'Age du Bronze Bulletin*, 11, 59-60.

- McNeil, R. 1973. A Report on the Bronze Age Hoard from Wick Park, Stogursey, Somerset, *Proceedings of the Somersetshire Archaeological and Natural History Society* 117, 46-64.
- Metcalf, V. & Lambert, I.G. 1979. 'Note: Peterston-super-Ely (ST 07567547)', *Archaeology in Wales*, 19, 17.
- Moore, C.N. 1978. The South Welsh Axe: Its Origins and Distribution, *Archaeological Journal* 135, 57-66.
- Musson, C.R. 1991. *The Breiddin Hillfort. A later prehistoric settlement in the Welsh Marches*. Oxford: CBA Research Report No.76.
- Needham, S. 1981. *The Bulford-Helsbury Manufacturing Tradition; The production of Stogursey socketed axes during the later Bronze Age in Southern Britain*, British Museum Occasional Paper No 13.
- Needham, S.P. 1990. *The Petters Late Bronze Age Metalwork; An analytical study of Thames Valley metalworking in its settlement context*, British Museum Occasional Paper No. 70
- Needham, S. 1996. Chronology and Periodisation in the British Bronze Age, *Acta Archaeologica* 67, 121-40.
- Needham, S. Ramsey, C.B., Coombs, D., Cartwright, C. & Pettitt, P. 1997. An Independent Chronology for British Bronze Age Metalwork: The Results of the Oxford Radiocarbon Accelerator Programme, *Archaeological Journal* 154, 55-107.
- Northover, J.P. *unpublished. Bronze Age Metalwork from Wales and The Marches*. Unpublished manuscript and catalogue.
- Savory, H.N. 1965. The Guilsfield Hoard, *Bulletin of the Board of Celtic Studies* 21(II), 179-96.
- Savory, H.N. 1972. A Late Bronze Age Hoard from Princetown (Mon.), *Bulletin of the Board of Celtic Studies* 25(I), 92-7.
- Savory, H.N. 1980. *Guide Catalogue of the Bronze Age Collections*, Cardiff: National Museum of Wales.
- Schmidt, P.K. & Burgess, C.B. 1981. *The Axes of Scotland and Northern England*, Prähistorische Bronzefunde, Abt IX.7; München: C.H. Beck'sche Verlagsbuchhandlung.
- Storrie, J. 1887. Interesting Discovery at Llantwit Major, *Archaeologia Cambrensis* 4 (5<sup>th</sup> series), 151-55.
- Turner, L. C. E. 1998. *A re-Interpretation of the Late Bronze Age Metalwork Hoards of Essex and Kent*. Unpublished PhD thesis, University of Glasgow.
- Williams, W.W. 1877. Bronze Implements and Copper Cake, *Archaeologia Cambrensis* 8(4<sup>th</sup> series), 206-211.





