

BRONZE AGE HOARD, CEREDIGION: SURVEY AND EXCAVATION



Site location of hoards.

Prepared by Dyfed Archaeological Trust
For: Cadw



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BRONZE AGE HOARD, CEREDIGION: SURVEY AND EXCAVATION

By

Charles Enright

This report has been edited to remove any details that specifically identify the site's geographic location.

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BRONZE AGE HOARD, CEREDIGION: SURVEY AND EXCAVATION

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EXECUTIVE SUMMARY

Following the discovery of a late Bronze Age hoard in two pits c.10m apart in Ceredigion in January 2020, Dyfed Archaeological Trust carried out a small investigation grant-aided by Cadw. Pit 1 contained a range of objects including spearheads, a knife, socketed axes, a pin and a palstave. Pit 2 contained over 15 socketed axes and a gouge. The hoard is one of the largest of this date to be found in Wales.

Topographic survey, geophysical survey and small-scale excavation indicate that the pits containing the hoard were isolated features and not part of a larger archaeological site.

CRYNODEB GWEITHREDOL

Yn dilyn darganfod celc o ddiwedd yr Oes Efydd mewn dau bwl tua 10m ar wahân yng Ngheredigion ym mis Ionawr 2020, cynhaliodd Ymddiriedolaeth Archeolegol Dyfed ymchwiliad bach gyda chymorth gan Cadw. Roedd pwll 1 yn cynnwys ystod o wrthrychau gan gynnwys blaenau gwaywffyn, cyllell, bwyelli soced, pin, a phalstaf. Roedd pwll 2 yn cynnwys dros ben 15 bwyelli soced a gafnu. Y celc yw un o'r mwyaf o'r dyddiad hwn sydd i'w gael yng Nghymru.

Mae arolwg topograffig, arolwg geoffisegol a chloddio fach yn dangos bod y pyllau sy'n cynnwys y celc yn nodweddion unig ac nad oeddent yn rhan o safle archeolegol mwy.

**BRONZE AGE HOARD, CEREDIGION:
SURVEY AND EXCAVATION**

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**BRONZE AGE HOARD, CEREDIGION:
SURVEY AND EXCAVATION**

SUMMARY

In early 2020 metal detectorists discovered one of the largest late Bronze Age hoards ever found in Wales in two shallow pits approximately 10m apart. Pit 1 contained a range of objects including spearheads, a knife, socketed axes, a pin and a palstave. Pit 2 contained over 15 socketed axes and a gouge. Other artefacts probably originally from these two pits were found in topsoil within c.15m of the pits. Dyfed Archaeological Trust received grant-aid from Cadw to carry out investigative works to ascertain if further significant archaeology survived at the site. Dyfed Archaeological Trust carried out a geophysical survey and topographical survey of the hoard field and excavated a trench around the position of each pit.

The geophysical survey did not detect anything of archaeological significance within the surrounding area of the pits aside from remnants of probable former field boundaries.

The trench over Pit 1 found no surviving evidence of the original pit for the hoard indicating it had been completely excavated by the metal detectorists, but several small fragments of bronze were recovered. In the trench over Pit 2 possible remnants of the original pit were noted, albeit heavily disturbed by the metal detectorists' excavations.

The results of the investigation show no surviving traces of significant archaeological features within the area of the two hoards.

At the time of writing, all the artefacts are with National Museum Wales. The Museum will produce a report as part of a treasure case put to HM Coroner for Ceredigion.

1. INTRODUCTION

1.1 Project Commission

- 1.1.1 In mid-January 2020 metal detectorists discovered a late Bronze Age hoard in a field in two separate pits c.10m apart. The hoard is the largest of late Bronze Age date discovered in Wales since the 19th century. The detectorists reported their findings to Dyfed Archaeological Trust on 15th January 2020.
- 1.1.2 Pit 1 contained a range of objects including spearheads, a knife, socketed axes, a palstave and other objects. Pit 2 contained socketed axes and a gouge (Photo 1). In addition, a few other artefacts were found scattered within an area of a c.10-15 radius of the pits.
- 1.1.3 The artefacts are from the largest Bronze Age hoard found in Wales since the 19th century and at least double the number of known Bronze Age bronze artefacts from Ceredigion and are thus of exceptional public and academic interest.
- 1.1.4 The main threat comes from our current lack of knowledge about the site. Is the hoard an isolated feature or part of a larger complex?
- 1.1.5 Shortly after the discovery was reported Cadw grant-aided Dyfed Archaeological Trust to investigate the site. Topographic survey and geophysical survey of the field containing the hoard was followed by the hand excavation of two excavation trenches over the locations of the hoard pits. This work has been deemed the minimum to be sufficient to characterise the site and inform its management and potential scheduling. All work was carried out in conjunction with the metal detectorists.



Photo 1: The hoard – artefacts recovered by the metal detectorists.

1.2. Project Aim and Objectives

1.2.1 The project addresses several general research objectives for the Neolithic, Early Bronze Age, Later Bronze Age and Iron Age set out in *Introducing a Research Framework for the Archaeology of Wales*:

Understanding monuments – Ritual and Burial

1.2.2 The aims of the project were:

- to define the extent and character of the archaeology of the site
- to formulate ways in which the remains can be managed and protected for future generations
- to make appropriate scheduling recommendations

The objectives were:

- to characterise the buried remains at the site
- to improve our understanding, management and protection of the sites, and by extension, other similar sites in the region
- to engage volunteers in the project
- to provide information for a Treasure report being prepared by National Museum Wales
- to recommend further work on the site

1.3 Report Outline

1.3.1 This report provides a summary and discussion of the archaeological investigation and its results and puts those results within their regional and national context.

1.4 Abbreviations

1.4.1 Sites recorded on the regional Historic Environment Record (HER) are identified by their Primary Record Number (PRN) and located by their National Grid Reference (NGR). Sites recorded on the National Monument Record (NMR) held by the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) are identified by their National Primary Record Number (NPRN). Scheduled Monument (SM). Altitude is expressed to Ordnance Datum (OD). References to cartographic and documentary evidence and published sources will be given in brackets throughout the text, with full details listed in the sources section at the rear of the report.

1.5 Illustrations

1.5.1 Printed map extracts are not necessarily produced to their original scale.

1.6 Timeline

1.6.1 The following timeline (Table 1) is used within this report to give date ranges for the various archaeological periods that may be mentioned within the text.

Period	Approximate date	
Palaeolithic –	c.450,000 – 10,000 BC	Prehistoric
Mesolithic –	c. 10,000 – 4400 BC	
Neolithic –	c.4400 – 2300 BC	
Bronze Age –	c.2300 – 700 BC	
Iron Age –	c.700 BC – AD 43	
Roman (Romano-British) Period –	AD 43 – c. AD 410	Historic
Post-Roman / Early Medieval Period –	c. AD 410 – AD 1086	
Medieval Period –	1086 – 1536	
Post-Medieval Period ¹ –	1536 – 1750	
Industrial Period –	1750 – 1899	
Modern –	20 th century onwards	

Table 1: Archaeological and Historical Timeline for Wales.

¹ The post-medieval and industrial periods are combined as the post-medieval period on the Regional Historic Environment Record as held by Dyfed Archaeological Trust

2. THE SITE

2.1 Site Location

- 2.1.1 The hoard was found towards the northern end of a large field in Ceredigion (Figures 1 – 2; Photo. 2) at a height of 185m OD on flat ground to the north of a rounded hillock (Photo. 3). The hillock stands proud in its low lying surroundings and offers spectacular panoramic views. This may have been viewed as a significant vantage point and could have influenced prehistoric activities. A parish tithe map of 1845, depicts the summit of this hillock with a circular annotation. It is unclear what this is. However, the Ordnance Survey 1:2500 1st Edition map of 1890 shows this feature to be a small coniferous plantation enclosed in a circle, presumably a bank (Fig. 3). The plantation and its surrounding bank had been removed by 1905 when the Ordnance Survey published the 2nd edition of the map. There is no trace of this plantation on the ground.
- 2.1.2 A pleasant climate and fertile soils in Ceredigion would have almost certainly attracted the attention of early settlers. There are several metal mines within the surrounding area, and although many of them are known primarily as post-medieval industries, it is thought probable that many had much earlier origins. Despite this, evidence of prehistoric activity in the area is scarce. Most of the HER entries relating to prehistoric activity refer to individual find spots. The nearest evidence of early settlement is an Iron Age hillfort located approximately 2km north of the hoard findspot.
- 2.1.3 This paucity of observed prehistoric activity is more likely to be due to a lack of archaeological investigation as opposed to a true reflection of the actual absence of prehistoric activity.



Photo 2: View looking north towards the location of hoard discovery.



Photo 3: View south of Trench 1 below the hillock.

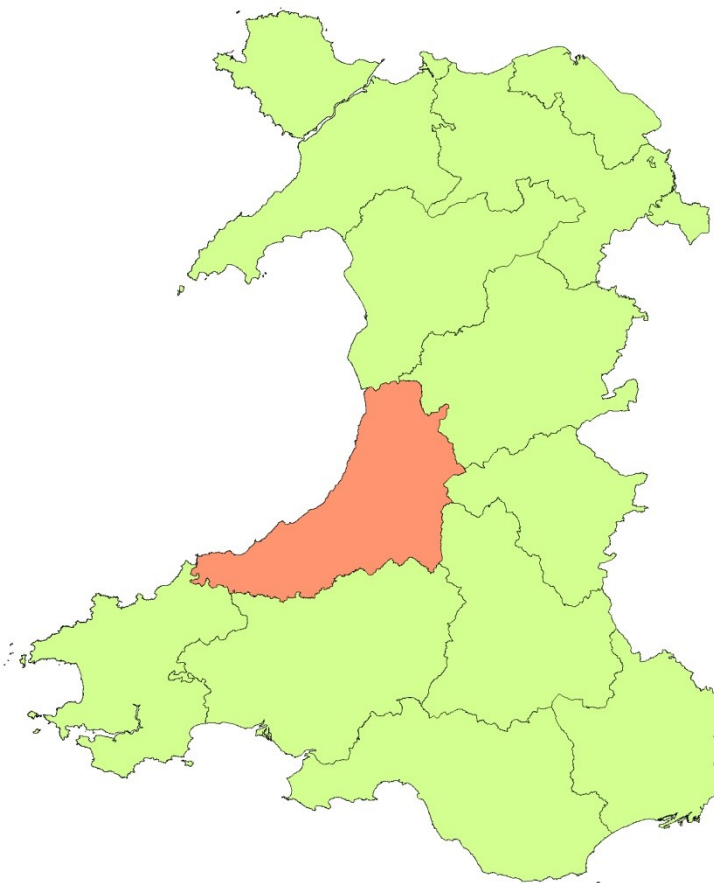


Figure 1: General site location. *This image has been edited to remove specific geographical information..*



Figure 2: Detailed site location plan. *Image redacted.*



Figure 3: 1845 tithe map and the 1890 Ordnance Survey 1:2500 1st Edition map. The location of the hoard lies to the north of the circular feature.

3. METHODOLOGY

3.1 Topographical survey

- 3.1.1 The topographical survey was conducted using a Trimble R8s integrated GNSS to acquire 3-dimensional data. Data was recorded along transects at approximately 10m intervals, or where obvious changes in gradient occurred. A TSC3 controller was used to record the data points.
- 3.1.2 The data were processed using the Trimble Business Center 5.20 to create an accurate contour map.

3.2 Geophysical Survey

- 3.2.1 A fluxgate gradiometer with a DL601 data logger was used to conduct the detailed geophysical survey, which detects variations in the earth's magnetic field. A sample interval of 0.25m (four readings per metre) was used with 1.0m wide traverses across 30m x 30m grids using the zigzag traverse method of collecting data. The gradiometers sensitivity was set to detect a magnetic variation in the order of 0.1 nanoTesla.
- 3.2.2 The survey grid was tied into the local Ordnance Survey grid using a Trimble R8s integrated GNSS system with TSC3 controller.
- 3.2.3 The data was processed using *Terrasurveyor 3.0* and is presented with a minimum of processing. The presence of high values caused by ferrous objects, which tend to hide fine details and obscure archaeological features, have been 'clipped' to remove the extreme values allowing the finer details to show through.
- 3.2.4 The processed data has been presented as a grey-scale plot, overlaid on local topographical features. The main magnetic anomalies have been identified and an interpretation of those results is also given.

- 3.2.5 The resulting survey results and interpretation diagrams should not be seen as a definitive model of what lies beneath the ground surface; not all buried features will provide a magnetic response that can be identified by the gradiometer. In interpreting those features that are recorded the shape is the principal diagnostic tool, along with a comparison with known features from other surveys. The intensity of the magnetic response could provide further information, a strong response, for example, indicates burning, high ferric content or thermoremnancy in geology. The context may provide further clues but the interpretation of many of these features is still largely subjective.
- 3.2.6 All measurements given will be approximate as accurate measurements are difficult to determine from fluxgate gradiometer surveys. The width and length of the identified features can be affected by its relative depth and magnetic strength.
- 3.2.7 The results of the geophysical survey do not necessitate the need for XY trace plots to enhance the interpretation and have not been included.

3.3 Excavation Trenches

- 3.3.1 The excavation trenches consisted of two 1m x 1m trenches located over hoard pits. Each trench was hand excavated and the opened area was fully cleaned using hand tools to expose the deposits below the topsoil.
- 3.3.2 All archaeological deposits and features were recorded by archaeological context record sheet, scale drawing/detailed survey and photography. A photographic record was maintained.
- 3.3.3 All individual archaeological deposits or features were numbered using the open-ended numbering system. Each numbered deposit was described and is shown within rounded brackets () in the text.
- 3.3.4 Recording of all archaeological structures, features or deposits conformed to best current professional practice and was carried out in accordance with the Recording Manual used by Dyfed Archaeological Trust.
- 3.3.5 A Trimble R8s integrated GNSS was used to record the trench location.
- 3.3.6 The trenches were backfilled at the end of the excavation with the material removed during the excavation.
- 3.3.7 This evaluation was undertaken in accordance with the Chartered Institute of Archaeologists' (CIfA) Standard and Guidance for an Archaeological Field Evaluation (2014).

4.0 RESULTS

4.1 Topographical Survey

- 4.1.1 The resultant contour plot can be seen in Figure 4. The results illustrate the hillock located in the middle of the field which rises to 191mOD.

4.2 Geophysical Survey

- 4.2.1 The geophysical survey results are presented as a greyscale plot overlaid on a 1:10k OS map (Fig. 5). An interpretation of the results is provided in Figure 6. In total, an area measuring 1.7ha was surveyed.

Ferrous material (Dipoles)

- 4.2.2 In geophysical greyscale plots, dipole anomalies are commonly seen across a range of sites, particularly agricultural land. Generally, unless they form a pattern or a part of a larger feature they are disregarded as not significant. They are usually the result of miscellaneous modern ferrous-rich debris, such as brick and tile fragments as well as objects such as horseshoes or broken ploughshares, which lie within the topsoil. In rare instances, isolated dipoles may reflect features of archaeological interest, but only intrusive investigation can determine this.

Possible pits

- 4.2.3 Potential pits are often seen distributed throughout survey areas. It is likely that some of these could have an archaeological origin but it is also just as likely that they represent a natural feature such as a tree throw (former root bole of a tree shrub). Unless any discernible arrangement or grouping is apparent it is difficult to determine their origin. One possible pit lies close to the location of the hoard, but it is worth noting that an intensive metal detector search of this area did not reveal any evidence of buried metal artefacts.

Geology

- 4.2.4 Bands of increased magnetic response that are thought to be of a natural origin. They likely relate to variations in the underlying geology, such as around the crest of the hillock and within the vicinity of the quarry pit where bedrock is exposed.

Archaeological features

- 4.2.5 **1) Angled linear** – This 'L'-shaped anomaly traverses across the field from the western boundary for approximately 50m before a right-angled turn southwards. It continues to run for a further 8m before becoming masked by the natural geological background noise in the area.
- 4.2.6 **2) Parallel Linears** – This pair of parallel linear anomalies exhibit a defused response orientated roughly southwards for a short section of approximately 7m.

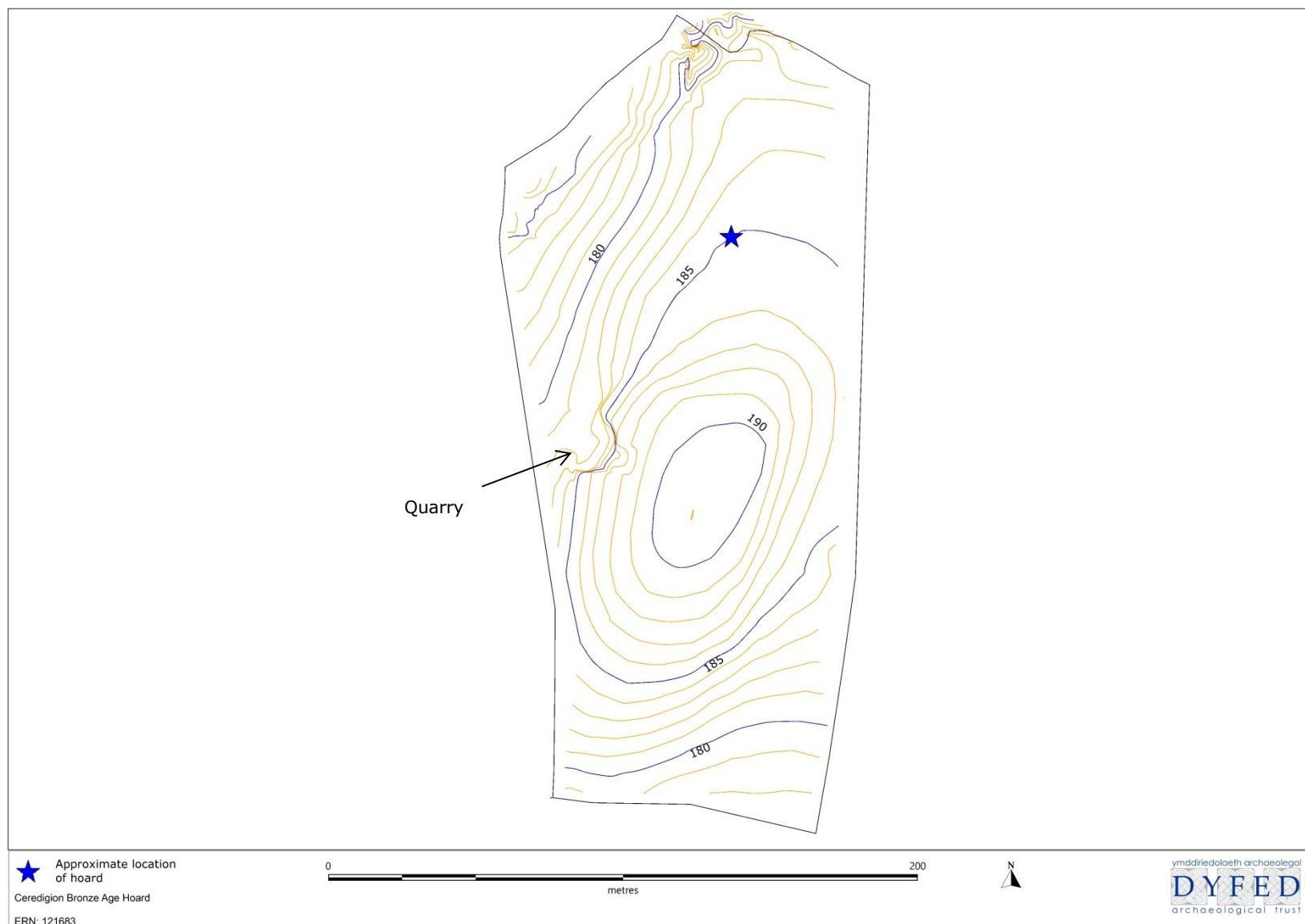


Figure 4: Topographic survey results. *This image has been edited to remove geographical information.*



Figure 5: Geophysical greyscale plot overlaid on 10k OS map. *This image has been edited to remove geographical information.*

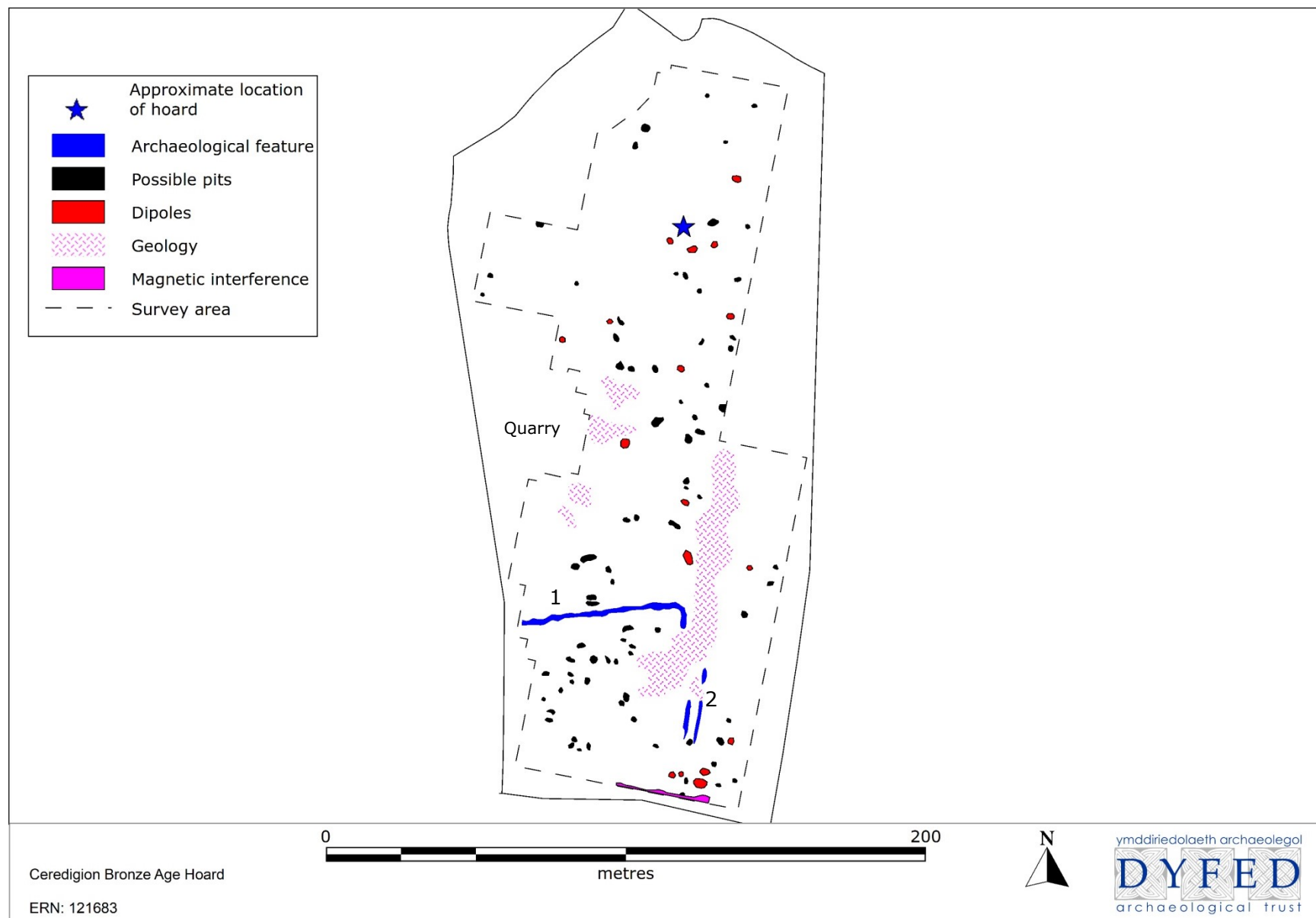


Figure 6: Geophysical survey results interpretation. *This image has been edited to remove geographical information.*



Figure 7: Plan showing location of excavation trenches. *This image has been edited to remove geographical information.*

4.3 Excavation

4.3.1 Figure 7 shows the location of the excavation trenches.

Trench 1

4.3.2 Trench 1 was centred over the location of the metal detectorists' Pit 1.

4.3.3 Topsoil comprised loose, dark-brown silty-clay (1000) approximately 0.10m thick. One small fragment of bronze was retrieved from the spoil from the metal detectorists' pit to the side of the trench.

4.3.4 A c.0.20m thick moderately compacted light grey/brown silty-clay (1001), with frequent inclusions of small sub-angular stones, lay beneath the topsoil. Six small fragments of bronze were retrieved from this deposit as well as two fragments of post-medieval pottery. The pottery was not retained.

4.3.5 Undisturbed geological deposits (1002) consisting of a firm, light yellow silty-clay with frequent small, sub-angular stone inclusions lay beneath deposit (1001).

4.3.6 The metal detectorists' pit had penetrated the top to the geological deposits (1002). Evidence for an original pit containing the hoard had been removed by the detectorists' pit. Photo 4 shows the fully excavated trench.



Photo 4: View of Trench 1 (2 x 1m scales).

Trench 2 (Figure 8)

- 4.3.7 Trench 2 was centred over the location of the metal detectorists' Pit 2.
- 4.3.8 Trench 2 was excavated to the top of undisturbed geological deposits (2002) – the same light yellow silty-clay as seen in Trench 1. This was overlain by a light grey/brown silty-clay subsoil (2001), similar to that in Trench 1, which contained several fragments of post-medieval pottery, modern china and a possible piece of worked stone.
- 4.3.9 Possibly cut through the subsoil (2001) were the possible remnants of the original pit [2003] that contained the Bronze Age hoard (Photo. 5). The pit had been heavily truncated by the metal detectorists' pit. The remains of the pit suggested a size of 0.34m in diameter and up to 0.22m deep, with its base penetrating the top of geological deposits. There were possible remnants of the pit fill (2004) on its southern edge and base; a sample of this was collected. The fill consisted of light to mid-brown silty-clay with occasional flecks of charcoal and small fragments of bronze, all of which were retained.
- 4.3.10 The pit and subsoil were overlain by the loose, dark brown silty-clay topsoil (2000).
- 4.3.11 If pit [2003] is the original hoard pit then it seems to have been cut through deposit (2001) containing post-medieval and modern artefacts. The most likely explanation is that these artefacts penetrated deposit (2001) from the overlying topsoil (2000) and that the original hoard pit was excavated through it. The alternative explanation is that deposits (2000, 2001) were both subject to ploughing in post-medieval/modern periods and that only the very base of the original pit, where it cut into geological deposits, survived. However, given the large number of artefacts found this explanation is unlikely.



Photo 5: View south of Trench 2 showing the possible remnants of the original pit that contained the Bronze Age hoard - half sectioned. (0.5m scale)

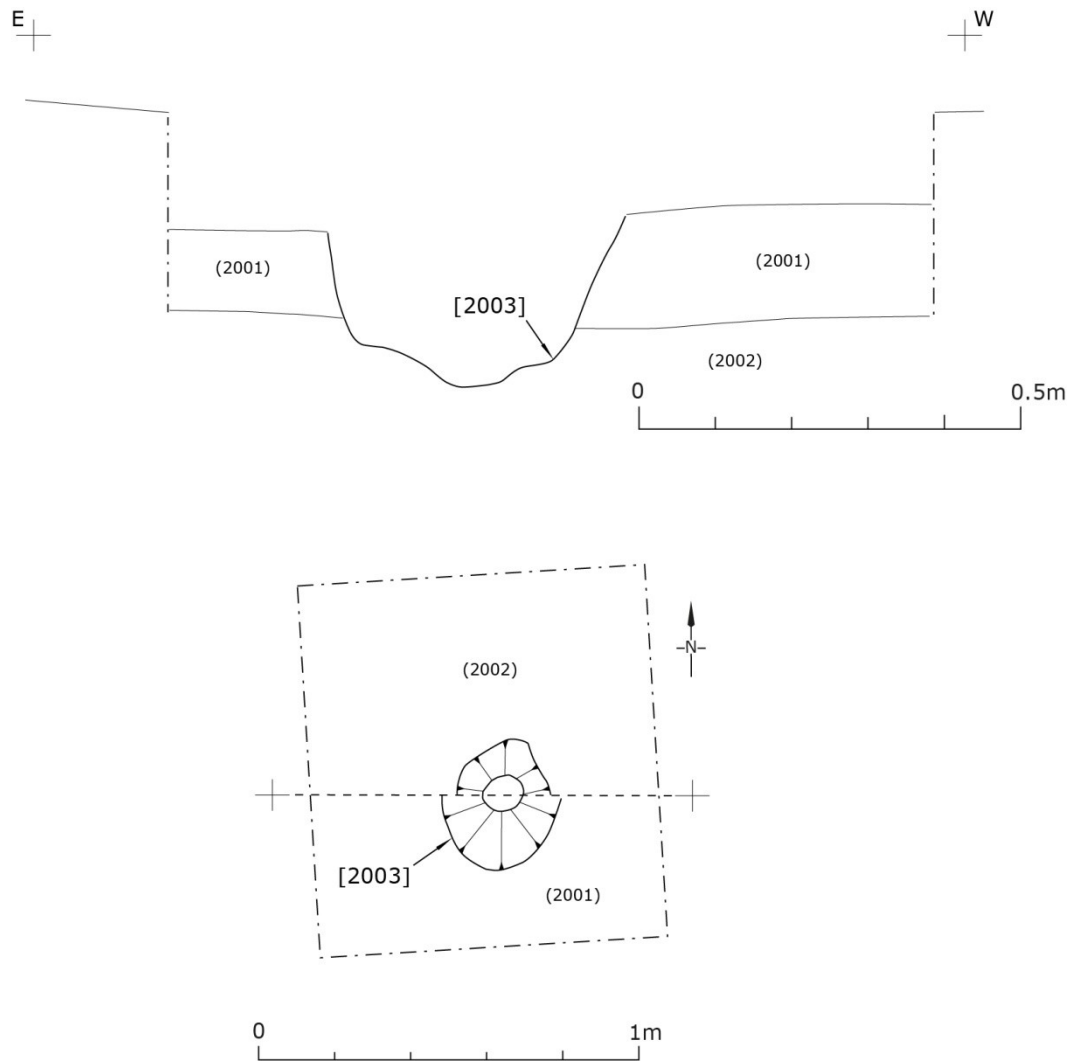


Figure 8: Plan and section drawing of Trench 2 showing the possible remnants of the original pit.

5. CONCLUSIONS

- 5.1 Figure 9 shows the results of the topographical survey and geophysical survey interpretation and location of the excavation trenches. The geophysical survey carried out before the excavation of the trenches found no traces of significant archaeological features within the immediate area of the hoards, nor the wider area of the field. The survey did reveal a right-angled linear anomaly (1) located just below the summit of the hillock on its southern side and two parallel linear anomalies (2) along the edge of the hillock on its eastern side. The negative response exhibited by each of these anomalies would suggest a possible bank, probably an earlier field boundary. The historic mapping available for this area shows no evidence of boundaries (or any other features) in this location suggesting they predate 1845. Any relationship between the linear features is uncertain. There is no evidence of any circular anomaly in the geophysical survey that could represent the possible feature illustrated in the 1845 tithe map atop the hillock.
- 5.2 Each trench showed a similar stratigraphic sequence of events, comprising geological deposits overlain by subsoil and topsoil. In Trench 1 there was no surviving evidence of the original hoard pit, however, in Trench 2 there were some possible remaining remnants of the original pit and its fill. Although the landowner reported that the field has not been recently ploughed the presence of modern china and post-medieval pottery indicates cultivation during the twentieth century and earlier. This would explain the discovery of bronze fragments and artefacts in topsoil within c.15m of the two hoard pits.
- 5.3 This investigation has met the aims and objectives of the project and the nature and extent of the archaeological potential of the site have been documented. The results suggest that there is no evidence of further significant archaeology within the immediate vicinity of the Bronze Age hoards found by the metal detectorists. This would suggest that the hoards are likely to be isolated features and do not appear to be part of a larger archaeological complex.

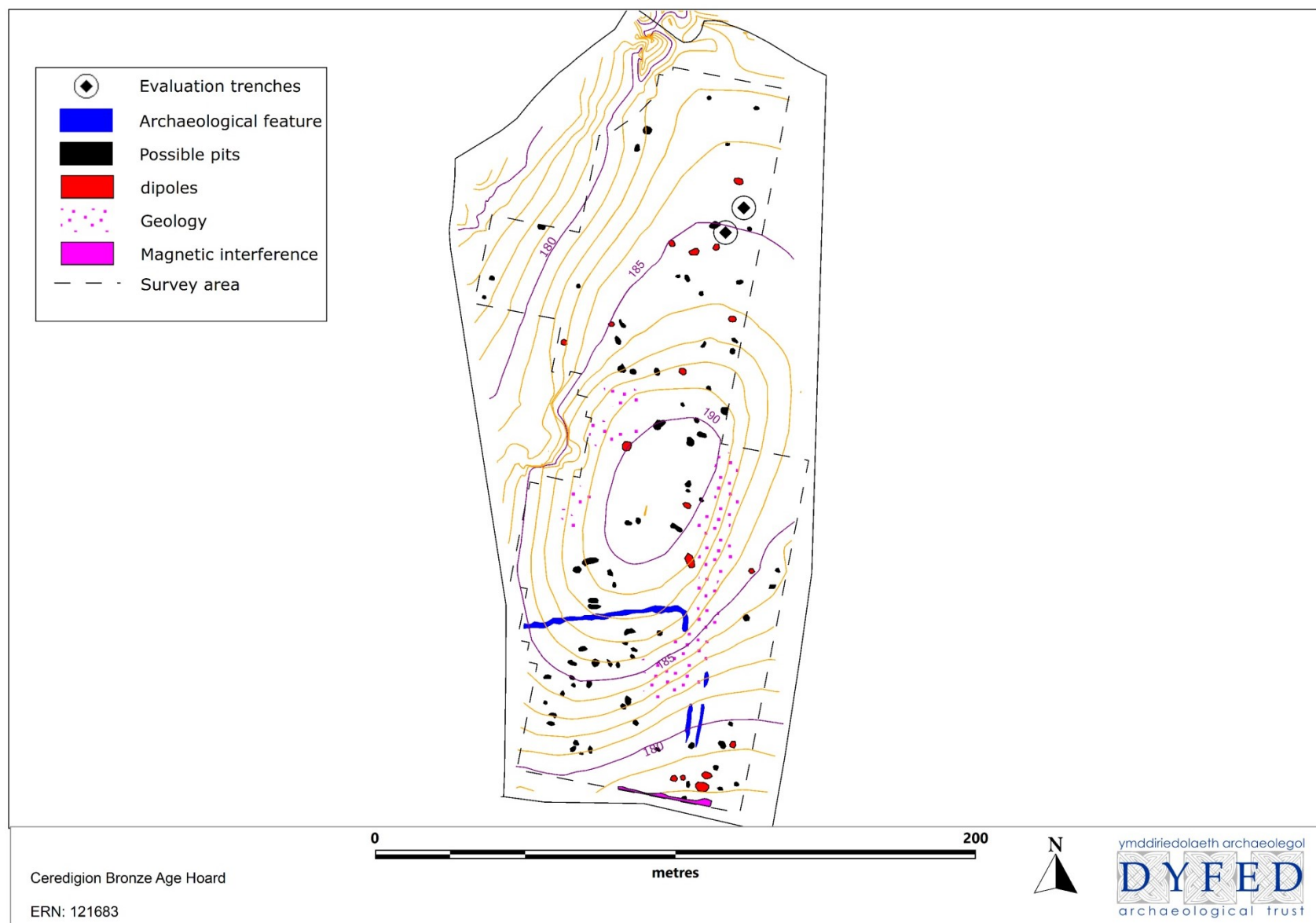


Figure 9: Topographic survey, geophysics interpretation and Trench location. *This image has been edited to remove geographical information.*
 DAT Archaeological Services 20 DAT Report No. 2020/11

6. SOURCES

Publications

CIFA, 2014 *Chartered Institute of Field Archaeologists Standards and Guidance for Archaeological Field Evaluation.*

National Standard and Guidance for Collecting and Depositing Archaeological Archives in Wales 2017.
<http://www.welshmuseumsfederation.org/en/news-archive/resources-landing/Collections/national-standard-and-guidance-for-collecting-and-depositing-archaeological-archives-in-wales-2017.html>

Database

Dyfed Archaeological Trust Historic Environment Record

Online resources

British Geological Survey: www.bgs.ac.uk

7. GLOSSARY

Hoard	A store of valued objects, typically one that is hidden.
Socketed Axe	A wedge-shaped axe head with no shaft or hole. The handle is fixed into a socket at the butt end.
Palstave	A type of early Bronze axe.
Hillock	A small hill or mound.
Fluxgate Gradiometer	An instrument used to measure magnetism to search for areas of disturbed ground that may be associated with subsurface archaeological features.
GNSS	Global Navigation Satellite System
nanoTesla (nT)	A unit of measurement of a magnetic field.
Ferrous	Metals and alloys that contain iron.
Dipole Anomalies	An anomaly consisting of a single positive response with an associated negative response forming a 'halo effect'. The negative and positive response is of equal magnitude but opposite polarity and are caused by the same feature. Dipole anomalies are very commonly observed across a range of sites, particularly agricultural land. Generally, unless the dipoles form part of a larger pattern or feature they are regarded as not significant. They are usually the result of modern ferrous rich debris such as brick and tile fragments as well as objects such as horse shoes or broken plough shares, which lie within the topsoil.

