LOWER TREGINNIS CHAMBERED TOMB, ST DAVID'S TOPOGRAPHICAL & GEOPHYSICAL SURVEY 2011

Prepared by Dyfed Archaeological Trust
For CADW

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Gan / By

Philip Poucher

Cadw

Llywodraeth Cynulliad Cymru
Welsh Assembly Government

Ymddiriedolaeth Archaeolegol Dyfed Cyf
Neuadd y Sir, Stryd Caerfyrddin, Llandeilo, Sir Gaerfyrddin SA19 6AF
Ffon: Ymholiadau Cyffredinol 01558 823121
Adran Rheoli Treftadaeth 01558 823131
Ffacs: 01558 823133
Ebost: info@dyfedarchaeology.org.uk
Gwefan: www.archaeolegdyfed.org.uk

Dyfed Archaeological Trust Limited
The Shire Hall, Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF
Tel: General Enquiries 01558 823121
Heritage Management Section 01558 823131
Fax: 01558 823133
Email: info@dyfedarchaeology.org.uk
*Website: www.*dyfedarchaeology*.org.uk*

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SUMMARY

Lower Treginnis Chambered Tomb is a Scheduled Ancient Monument (PE421, PRN 263) comprising two upright stones, one fallen side-stone and a displaced capstone, located on a headland overlooking Ramsey Sound. Cadw commissioned Dyfed Archaeological Trust Field Services to undertake a detailed topographical and geophysical survey of the monument and the surrounding area to provide an accurate record of the site and characterise any further archaeological remains in its immediate vicinity in order to inform further management of the site. The fieldwork was undertaken in February 2011.

The monument itself was recorded in close detail as part of the topographical survey. The survey identified a possible extra chamber or passage. The topographical survey also recorded adjacent earthworks and part of a possible large prehistoric enclosure on the headland (PRN 14268).

The geophysical survey identified a variety of features across the survey area, but could not establish associations with the chambered tomb with any certainty. The igneous rocks that form the tomb appear visible on the survey results, but fine detail about the monument itself could not be established. Together with the adjacent earthwork hollows, the monument stood within the corner of a large, possibly ditched, enclosure, although it remains unclear if these features are contemporary. This enclosure is one of four seemingly separate enclosures visible on the survey results, all possibly relating to different time periods, and pre-dating the earliest map record of the area from the mid 19th century. A small circular enclosure, of a size similar to prehistoric hut circles, was also identified on the geophysical survey, as was an unusual triangular enclosure of a similar size.

INTRODUCTION

Project commission

Lower Treginnis Chambered Tomb is a Scheduled Ancient Monument (PE421, PRN 263). The surviving remains comprise two upright stones, one fallen side-stone and a displaced capstone. The tomb is located on a headland overlooking Ramsey Sound. Prior to this survey only sketch plans existed of this site. The present scheduled ancient monument boundary closely surrounds the visible stones of the tomb.

Cadw commissioned Dyfed Archaeological Trust to undertake a detailed topographical and geophysical survey of the monument and the surrounding area to provide an accurate record of the site and potentially characterise further archaeological remains in the vicinity. This information would be used to allow an informed decision to be made on whether the scheduled area should be expanded and whether some superficial field clearance stones could be removed from the monument.

The fieldwork was undertaken in February 2011.

Scope of the project

This project aimed to characterise by geophysical survey, using a gradiometer, possible buried archaeological features and to provide an accurate record of the monument and its surrounding landscape using an EDM. The information from the surveys will aid in informing a possible scheduling recommendation and inform management of the site.

The project will also assist in addressing the research issue 'understanding monuments' as set out in the Neolithic and Early Bronze Age section of *Introducing a Research Framework for the Archaeology of Wales*.

Report outline

Because of the limited nature of this project, together with the considerable archaeological evidence in the area, this report is restricted solely to the results of the topographical and geophysical survey.

Abbreviations

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). Gradiometer readings are measured in nanoTesla (nT).

Southwest – SE; northwest – NW, southeast – SE, northeast – NE, south-southwest – SSW; west-southwest – WSW etc

THE SITE

Location and Archaeological Potential

The site is located on a headland to the west of St David's, Pembrokeshire, overlooking Ramsey Sound (SM 7178 2359; photos 1 & 2). The headland is relatively level, although crossed by several low ridges with an exposed rock outcrop 170m to the east. It is currently divided into several fields of improved pasture, with patches of gorse on the rougher ground. The coastal path skirts around the edge of these fields and the land drops in a series of rocky cliffs into the Ramsey Sound. Treginnis Isaf farm lies 700m to the NE.

The chambered tomb (PRN 263, SAM PE 421, photos 3, 4, 5 & 6) consists of two upright stones, one fallen side-stone and a displaced capstone, located close to the edge of a field. It lies within a roughly triangular shaped area of irregular ground against the field boundary that includes further earthworks that may be associated with the chambered tomb site, and several field clearance stones.

The site is protected as a scheduled ancient monument (SAM PE 421), although the boundary is drawn tightly around the stones and there has been limited previous recording work of the site. There has been no known intrusive archaeological investigation of the area. It lies in an area of relatively rich prehistoric archaeology, and there is some suggestion that relict field boundaries visible along the cliff edges may have prehistoric origins (PRN 13379). The headland itself may be divided by a large bank and ditch with prehistoric origins (PRN 14268). However, none of these sites have been investigated by intrusive archaeological techniques and consequently have not been firmly dated.

METHODOLOGY

A fluxgate gradiometer was used for the geophysical survey, which detects variations in the earth's magnetic field (full specifications are in Appendix 1). Due to the size of the area being covered, the geophysical survey was divided into two main surveys. In an area measuring roughly 100m to the east and west of the monument itself, and 40m to the north and south, readings were taken on traverses 0.5m wide and every 0.25m within a 20m x 20m grid. Further from the monument, in an extra area measuring at most 180m by 60m to the north, and at most 200m by 80m to the south, readings were taken on traverses 1m wide and every 0.25m within a 20m x 20m grid. In total an area of *c*.3.5ha was surveyed. A small strip along the central field boundary was left un-surveyed due to the presence of gorse and post and wire fencing that would have obscured any geophysical results.

The topographical survey was undertaken using a Trimble TST, this was also used to tie the geophysical survey grid into the Ordnance Survey grid. Profiles were also taken of the stones that comprise the monument using the Trimble TST.

Limitations

The geophysical and topographical surveys were undertaken simultaneously over a total of three days in February 2011. Weather conditions were generally dry but with the occasional strong wind prevalent on the exposed headland. The fields were bounded by post and wire fencing, which may have obscured some of the readings taken in their immediate vicinity. The survey area was relatively level and under short grass at the time of survey, pacing lines were also used throughout.

The underlying geology of acid tuff, an extrusive igneous rock, resulted in a relatively high variation in readings when trying to establish a 'zero point' (part of the initial set-up of the gradiometer). However, the geology also resulted in relatively strong signals across the site, which appeared to compensate for the variations evident in the zero point.

Processing and presentation

Processing of the geophysical survey data was performed using *ArchaeoSurveyor 2.5*, detailed explanation of the processes involved are described in Appendix 1. The data is presented with a minimum of processing (Figures 6 -8) but the presence of high values caused by ferrous objects and wire fencing tends to hide fine details and obscures archaeological features, thus the values were 'clipped' to remove the extreme values allowing the finer details to show through. All the surveys were clipped to a range from 15nT to –15nT.

The processed data is presented as grey-scale plots overlaid on local topographical features (Figure 9). The main magnetic anomalies have been identified and plotted onto the background topographic detail as a level of interpretation (Figure 10).

Processing of the topographical surveys was performed using Geosite software and illustrated and combined with the geophysical survey images using Adobe Illustrator ver.9 (Figures 2 - 5).

RESULTS

Geophysical and Topographical interpretation

(Interpretation Figure 10)

The geophysical survey shows a complex range of archaeological activity throughout the surveyed area, therefore only the major features are discussed. Any interpretation from these geophysical results is by its nature speculative and precise details about the context, function, state of preservation and date of any archaeological features would require further intrusive investigation.

No.1

The stones that comprise the monument appear to be detectable on the geophysical survey results as areas of magnetically positive readings, surrounded by a 'halo' of magnetically negative readings (Figures 6 & 9). Such a strong response is likely to be caused by the igneous nature of the stones themselves. The survey however does not reveal much more fine detail about the arrangement of stones than can be recorded at ground level by the topographic survey (Figures 2 - 5). No clear arrangement of buried stones or chambers can be identified with any confidence, although, along with the nearby earthworks (No.2), these responses appear to be contained within the limits of an enclosure (No.3). However, the relationship between the chambered tomb and the enclosure cannot be established on the basis of these survey results alone.

As well as the two upright stones, a fallen side-stone and a displaced capstone, topographically the monument may also include several smaller stones on its southern side (Figure 4). These stones appear to form three sides of a possible chamber or passage, *c*.1m wide and *c*.1.5m long. Several further stones are spread to the north of the upright stones, but there is no discernable regularity to the spread of these stones. Numerous field clearance stones are also spread throughout this area that may confuse the layout of the monument.

No.2

To the NE of the monument lie earthworks comprising, in the main, of two large hollows that appear to have been deliberately excavated (photos 7 & 8). The largest and most prominent is the westernmost hollow, 2.2m long, 1.2m wide, and appearing L-shaped in plan. To the east lies a shallower and more irregular hollow, 1.1m by 0.9m (Figures 2 & 3). The largest of these hollows is clearly identifiable on the geophysical survey results (Figures 6 & 9) as an area of magnetically negative readings, bounded along its southern edge by an almost linear area of magnetically positive responses. The smaller hollow also appears to be identifiable by an area of magnetically negative readings. Although clearly identifying this feature, it is unclear as to what these readings represent.

No.3

Topographically the chambered tomb, the adjacent earthworks, and several probable field clearance stones, lie within a triangular area, against the field boundary, of slightly depressed rougher ground surrounded by a slight low bank (Figures 2 & 3). This is also clearly depicted on the geophysical survey results by a linear feature of magnetically positive readings, often indicative of a buried ditch, mirrored in places along its northern edge by magnetically negative readings (Figures 6, 8 & 9).

This feature appears to represent a ditched enclosure, possibly with an accompanying bank, with a rounded corner. The geophysical results show this continuing into the adjacent field, something that is not visible topographically. It continues into the field to the north as a linear anomaly with very high positive and negative magnetic readings. Such high readings can often be indicative of ferrous items such as modern services, but as it appears to represent a continuation of an earlier boundary, it seems likely the high readings are a result of the igneous nature of the underlying bedrock.

The date of this boundary is unclear, and it does not appear on any examined historic map sources (the earliest examined being the parish tithe map of 1841). The line of the boundary appears to be overlaid by the current field boundary, which, if the map sources are accurate, appears to have been laid out at some point between the tithe map of 1841 when it is not visible, and the first edition Ordnance Survey map of 1889 when it is first shown.

No.4

A short linear feature is clearly visible running almost parallel to No.3 within the northern field. This consists of a slightly curvilinear feature of high magnetically positive readings with associated magnetically negative readings along its northern edge (Figures 6 & 9). It is only visible within the northern field, but its position may suggest it originates at the sub-rectangular hollow within the southern field, represented by No.2.

There is no clear indicator as to what these features relate to, or their date, although it should be noted that copper mining activity is recorded on this headland throughout the post-medieval period and a hollow and associated ditch may have some connection with this activity.

No.5

A linear anomaly is visible at the northern end of the area surveyed (Figures 8 & 9). This is represented by relatively faint magnetically positive and negative readings running in a straight line in an ESE direction for *c*.80m, before turning at a sharp right angle to head in a NNE direction. This would appear to line up with a relict field boundary still visible as slight earthworks and areas of rough ground, enclosing a sub-square field.

The date of this field is unclear, although some of its boundaries remain in use to the north and NW, the field is not marked on Ordnance Survey maps from 1889 to the present day. However, the 1889 Ordnance Survey does appear to show the western edge of the field. The map shows areas of stone and rough ground which may represent the remains of the northern and eastern edges, indicating the field had already gone out of use by that time. The tithe map of 1841 marks the area as one large open field with no subdivisions.

This feature crosses the boundary represented by No.3 at an angle suggesting the two are not contemporary, although the relationship between the two cannot be proved on the basis of the geophysical survey results alone.

No.6

Within the northern field, a linear feature extends in a northwestern direction for *c*.50m before turning at a right angle and heading in a northeastern direction (Figures 6, 8 & 9). As it heads NW, the feature is represented by a central linear feature of magnetically negative readings, with associated linear features of magnetically positive readings on either side. Such responses are often indicative

of a central bank with associated ditch, as often seen with field boundaries, or sometimes a trackway with associated drainage ditches. However, it appears to then turn a corner and then continue as a single magnetically positive linear feature, often indicative of a buried ditch.

The relationship of this anomaly with surrounding features is somewhat inconclusive. It may terminate at the strong linear feature represented by No.3, although there is some suggestion it may continue to the NE of No.3 as a faint magnetically positive linear anomaly. Here this feature runs in a northeastern direction at it southern end, as far as feature No.7, with a similar faint anomaly suggesting it continues for a short distance to the NE at its northern end.

It should also be noted however, that the section that runs in a northwestern direction bears some similarity to a similar response running parallel to, and clearly associated with, the current field boundary that separates the northern and southern fields (No.13). The southernmost section of the anomaly also begins in an area close to the current field gateway.

No.7

A possible circular feature lies within the northern field, identified by a curvilinear anomaly of magnetically positive readings (Figure 9). As mentioned previously, such readings are often indicative of buried ditches. This appears to define a circular feature *c*.13m in diameter, with a gap on its eastern side that may represent an entrance. Circular features of this nature are often interpreted as prehistoric in origin, although they could have a variety of origins from prehistoric hut circles to more recent cattle feeding stations. The possible eastern entrance indicated from the survey data would correspond with the similar location of entrances to Bronze Age and Iron Age roundhouses.

No.8

A short distance to the NE of the circular anomaly is an unusual triangular feature, picked out by a magnetically negative linear anomaly (Figures 8 & 9). This encloses an area *c*.15m by *c*.10m, lying adjacent to a curvilinear anomaly No.8. The origin and function of such a feature is unclear.

No.9

Lying adjacent to the unusual triangular feature No.8 is a curvilinear anomaly formed by magnetically negative readings suggesting a possible bank (Figures 8 & 9). It runs in a slightly sinuous form in a SE – NW direction within the northern field. The somewhat sinuous nature of this feature may be an indication that it is natural in origin, although its location immediately adjacent to anomaly No.8 may suggest archaeological origins.

No.10

Several seemingly related linear anomalies are visible within the southern field, along the southern edge of the area surveyed (Figures 7 & 9). These appear to form a series of enclosures bounded to the SE by a prominent ridge that crosses the headland in this area.

At the northeastern end the first enclosure is represented by a magnetically positive linear feature, often indicative of buried ditches. This extends from a large area of mixed magnetic readings that is likely to represent a natural geological feature, possibly where the bedrock comes close to the surface.

Topographically it also runs close to the base of a change in slope visible within the field. This linear feature runs in a NE – SW direction for *c*.55m before turning with a curved right-angled corner and heading for the ridge.

A similar linear feature extends to the SW of this, forming a second enclosure, again with a return to the SE at a point where the magnetic readings suggest another geological anomaly. This return appears to terminate at a further linear anomaly running in a NE – SW direction, and extending to the line of the prominent ridge. The latter anomaly is defined by magnetically negative readings, which may suggest this is formed by a bank or wall. The enclosures continue beyond the area surveyed by a continuation of both NE – SW lines.

A further linear feature is visible a short distance to the west, again running between geological anomalies. The similarity in alignment suggests this linear features is also related to the series of apparent enclosures.

It should also be noted that many of these linear features are heading in the general direction of a pond that lies a short distance to the SW, against the field boundary. This pond is visible on the first edition Ordnance Survey map of 1889, predating the current field boundary, and it appears to be fed by a spring or water channel emerging from its eastern edge.

At its northeastern end there is a suggestion that there may be an enclosing boundary running in a roughly north – south direction. This is however confused by the strong signals recorded relating to the natural geology, and therefore may relate to natural geology rather than archaeological features.

No.11

A series of curvilinear anomalies are visible in the southern field, consisting mainly of magnetically positive readings (Figures 6 & 9). The sinuous and irregular nature of these features would suggest they are caused by natural processes, either as former stream lines or as changes in the underlying geology.

No.12

It has been suggested that a bank and possible ditch boundary cuts off the entire headland in this area (PRN 14268). The bank is recorded on the topographical survey results (Figure 2), but as this was not the main focus of the survey work only the section that falls within the survey area has been recorded. The geophysical survey was extended in places in the hope of identifying any possible associated ditch along its lower western edge. There may be some suggestion of a fragment of ditch (Figures 7 & 9), but this also occurs in an area of high geological readings and along the route of the linear features forming the possible enclosures (No.10). Therefore both topographical and geophysical surveys are inconclusive in establishing if this bank does represent part of a prehistoric enclosure.

No.13

A line of magnetically negative readings, along with a parallel line of magnetically positive readings, crosses the survey area along the northern side of the current field boundary, crossing the site from east to west (Figures 6 & 9). The close similarity in alignment clearly indicate these readings are associated with the field boundary, and therefore likely to be 19th or 20th century in date.

CONCLUSION

One of the primary objectives for the surveys was to establish the extent of the chambered tomb and features related to it. The geophysical survey has identified a variety of features across the entire survey area but it cannot be proved with any certainty that these features are related to the chambered tomb. The topographical survey does suggest some of the smaller surrounding stones may be forming a hitherto unknown chamber or passage associated with the tomb, which should be included within the scheduled area. Although the chambered tomb and the nearby earthworks appear to be contained within a large enclosure there is no clear evidence to suggest a link between them. Further, more intrusive, archaeological investigations would be required to establish relationships with the chambered tomb.

The nearby earthworks are clearly visible on the survey results, but their character and relationships are not immediately apparent. Hollows such as those recorded are not typical of chambered tomb sites, and they have the appearance of a small quarry, or even a sheep-dip, although they give strong and distinctive readings on the geophysical survey, results that may indicate a more complex function.

What the surveys do appear to show is a range of enclosures across the headland, which appear to be of several differing time periods. Within the northern field alone three rectilinear enclosures (Nos.3, 5 & 6) are indicated, all intercutting and their alignments suggest separate periods of use. Only one enclosure, No.5, is suggested on historic map sources, and even that appears to have been out of use for some time by 1889 when the first edition Ordnance Survey map was drawn.

In the southern field a series of smaller enclosures are indicated (No.10), that appear to making use of natural features in their alignment. These enclosures all appear to predate the earliest mapping evidence for the area, the tithe map of 1841, which shows an unenclosed headland. The current field boundary crossing the survey area appears to have been established at some point in the mid to late 19th century.

There are also two discrete features of note, both within the northern field. A circular feature (No.7) is visible on the geophysical results, and such features are often indicative of prehistoric activity. To the NE lies a rather more unusual triangular feature (No.8) that is not so easily characterised.

SOURCES

Published

British Geological Survey, 1994, *The Rocks of Wales* 1:250,000.

Clark A J, 1996, *Seeing Beneath the Soil* (2nd edition). Batsford, London.

Maps

Anon 1841 *St David's Parish Tithe Map*

Ordnance Survey 1889 *1st edition 1;2500 Pembrokeshire*

Ordnance Survey 1906 *2nd edition 1;2500 Pembrokeshire*

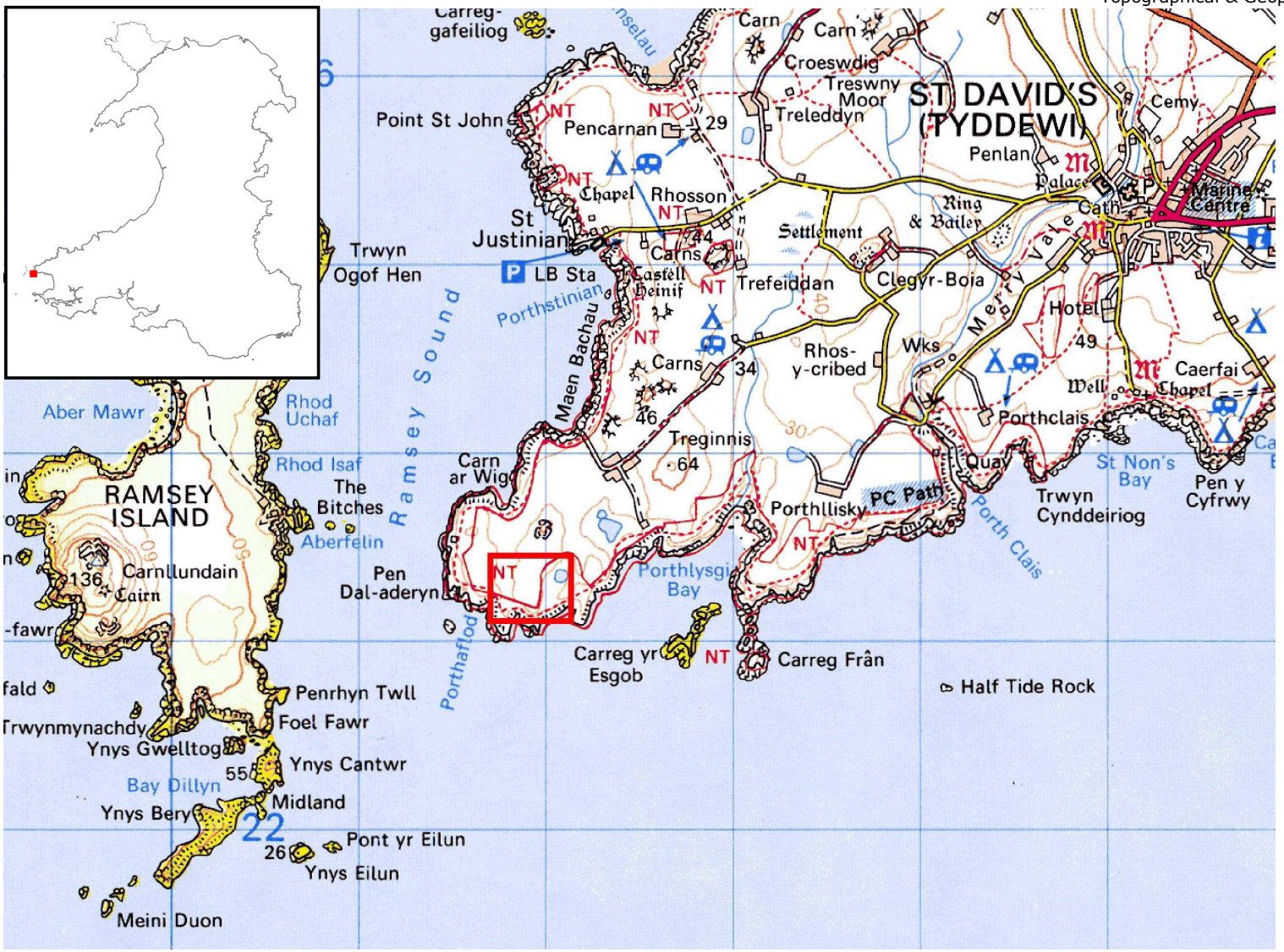

Figure 1: Location map, based on the Ordnance Survey

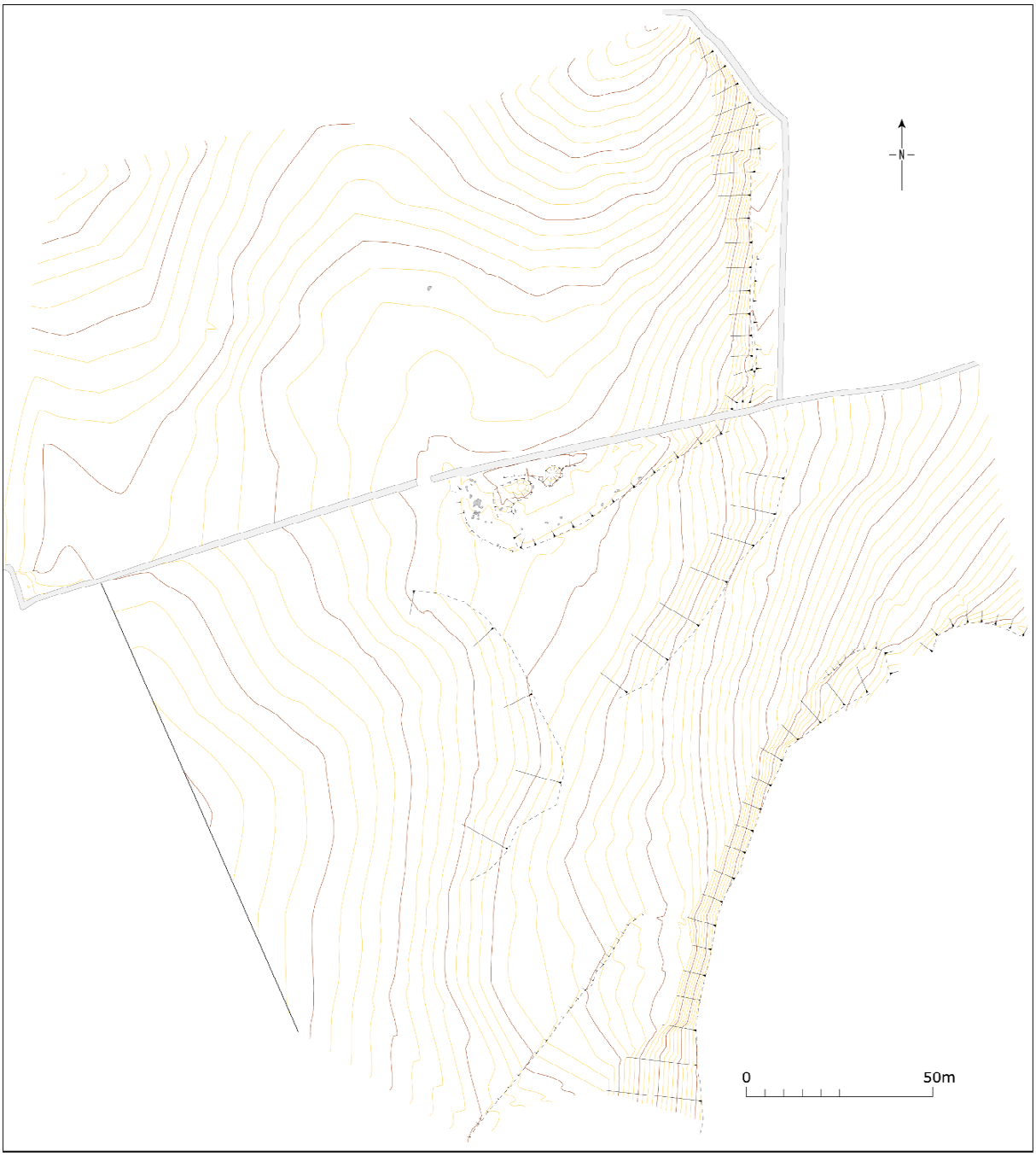

Figure 2: Topographical survey results. Contours are at 0.2m intervals, the field slopes from SE to NW.

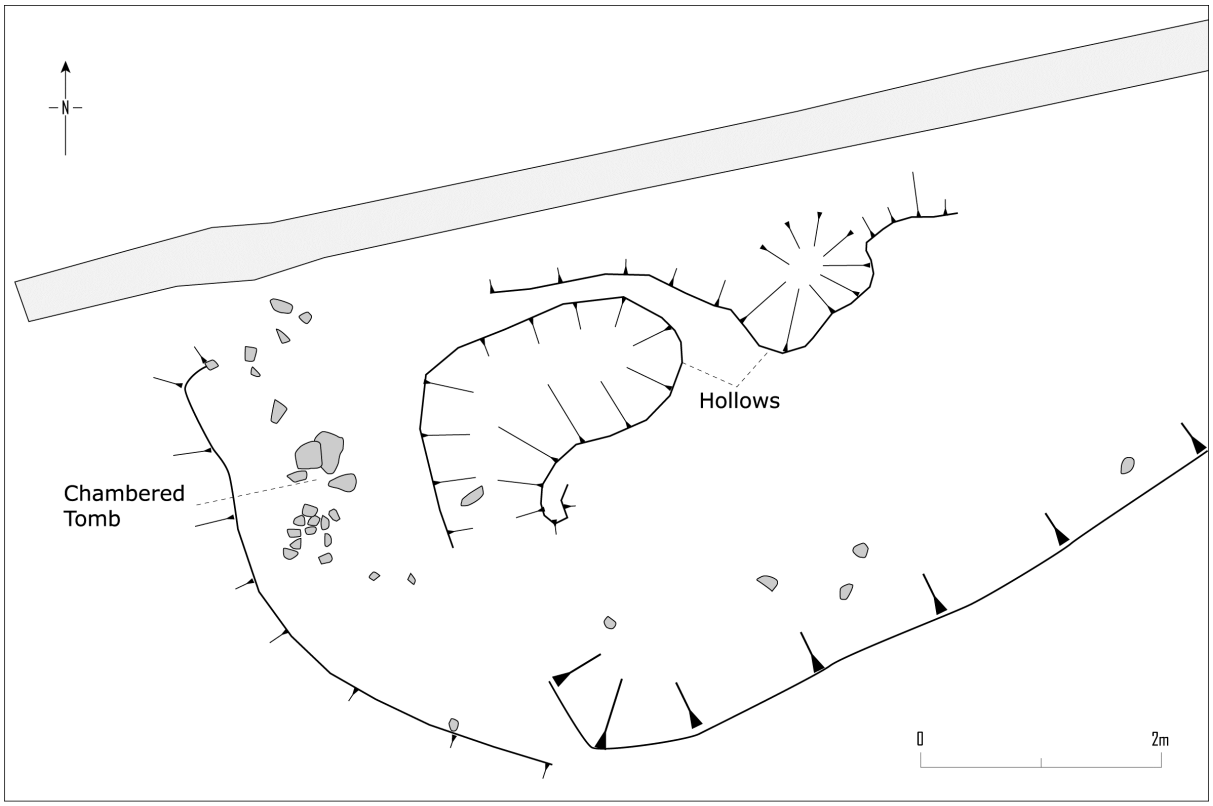

Figure 3: Close-up of the topographical survey results around the chambered tomb and adjacent earthworks.

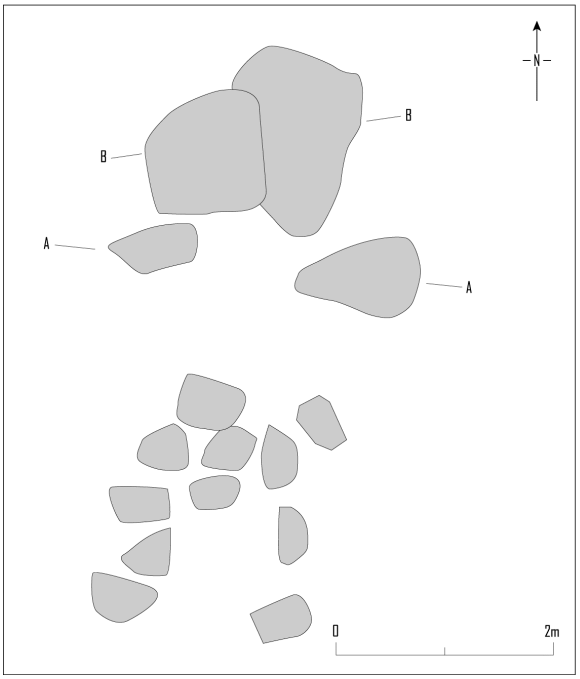

Figure 4: Detail of the stones forming the remains of the chambered tomb.

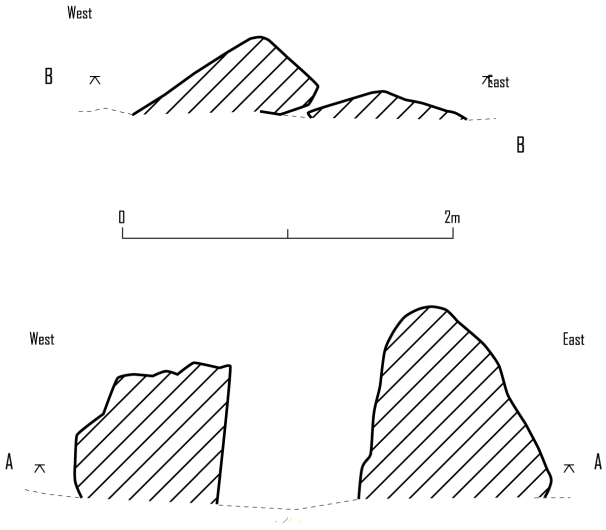

Figure 5: Profile of the stones forming the remains of the chambered tomb.

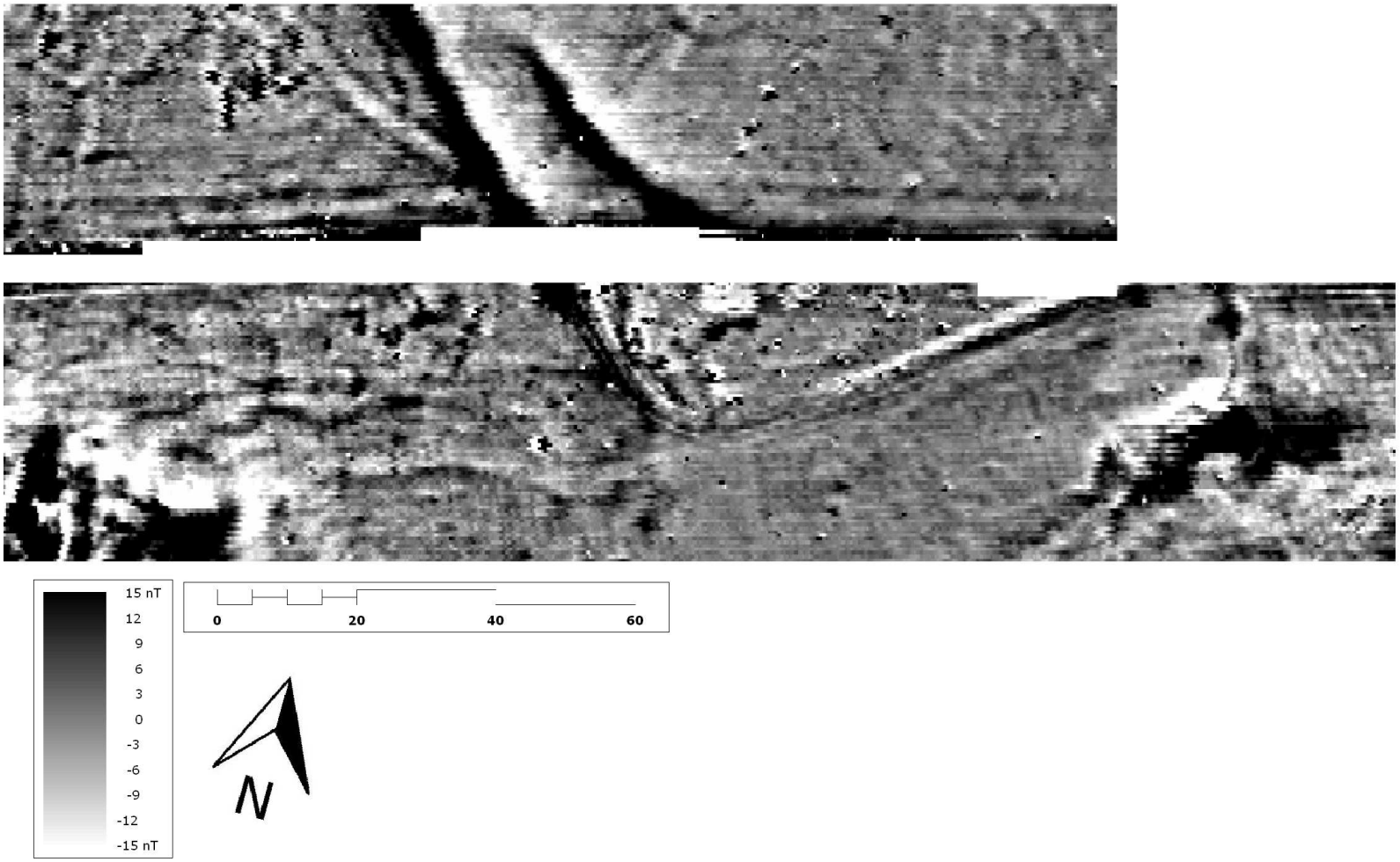

Figure 6: Geophysical survey results of area surveyed with readings taken on traverses every 0.5m wide. Clipped to a range from 15nT to -15nT but otherwise unprocessed.

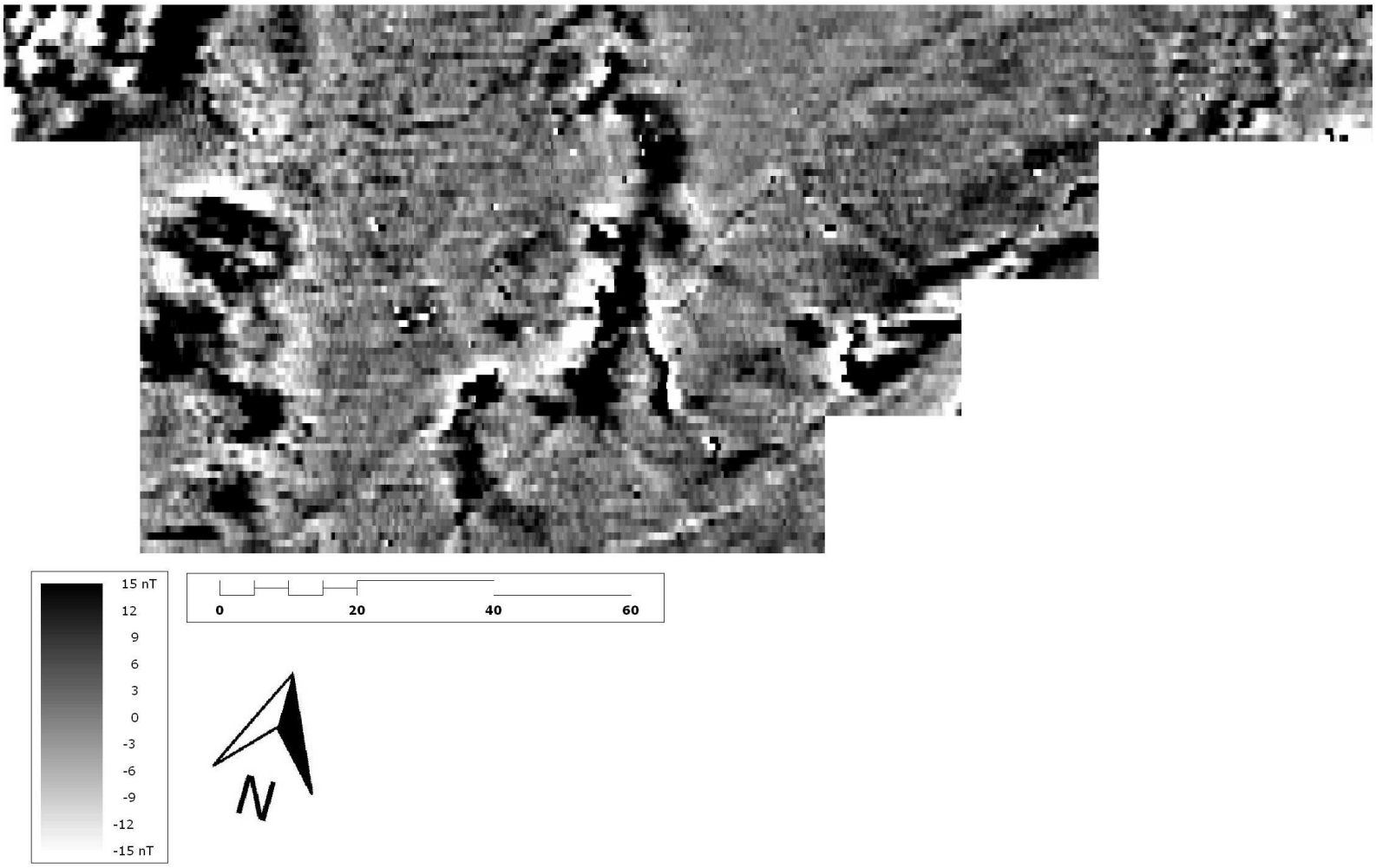

Figure 7: Geophysical survey results of area surveyed with readings taken on traverses every 1m wide. Clipped to a range from 15nT to -15nT but otherwise unprocessed.

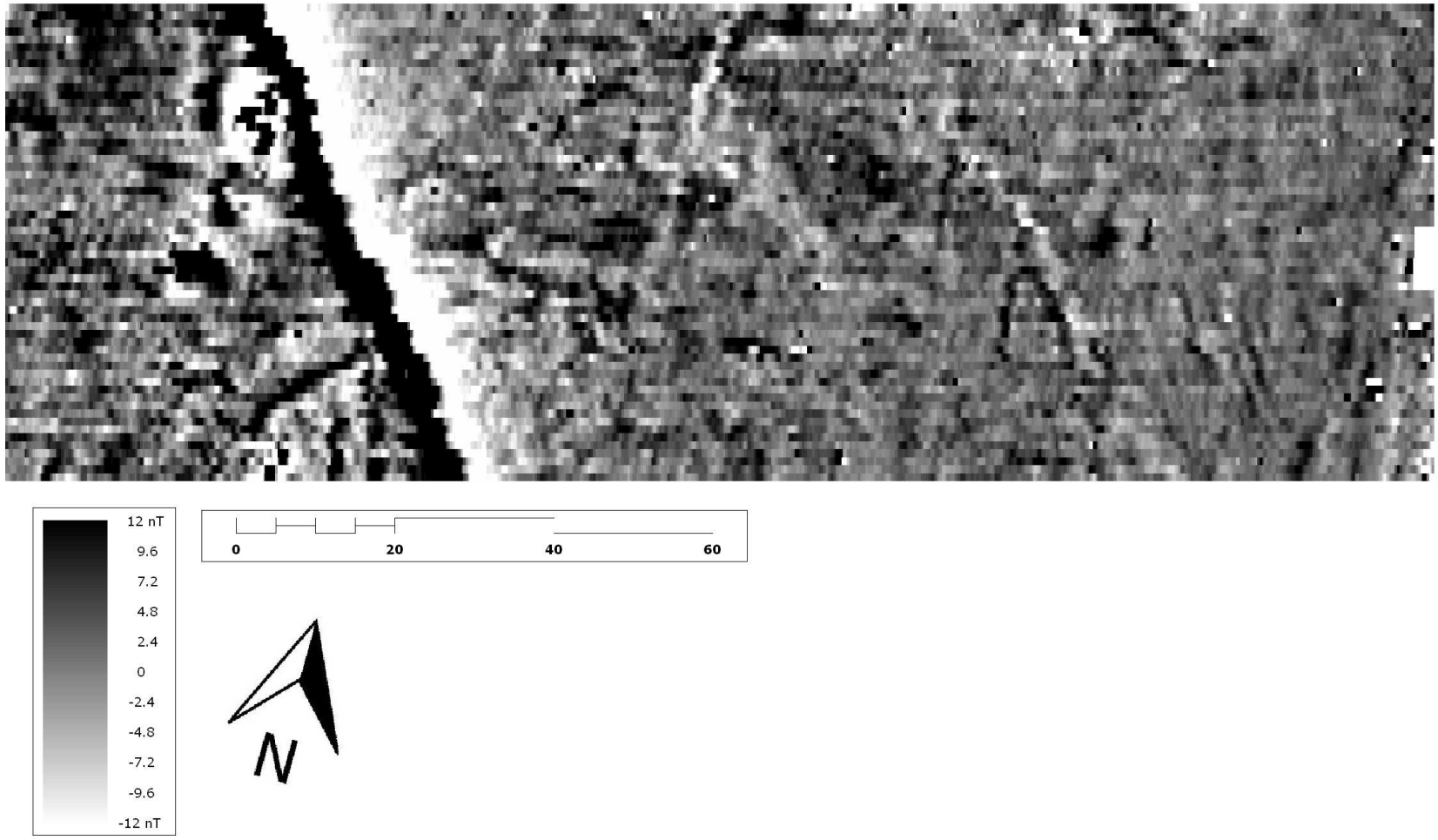

Figure 8: Geophysical survey results of area surveyed with readings taken on traverses every 1m wide. Clipped to a range from 12nT to -12nT but otherwise unprocessed.

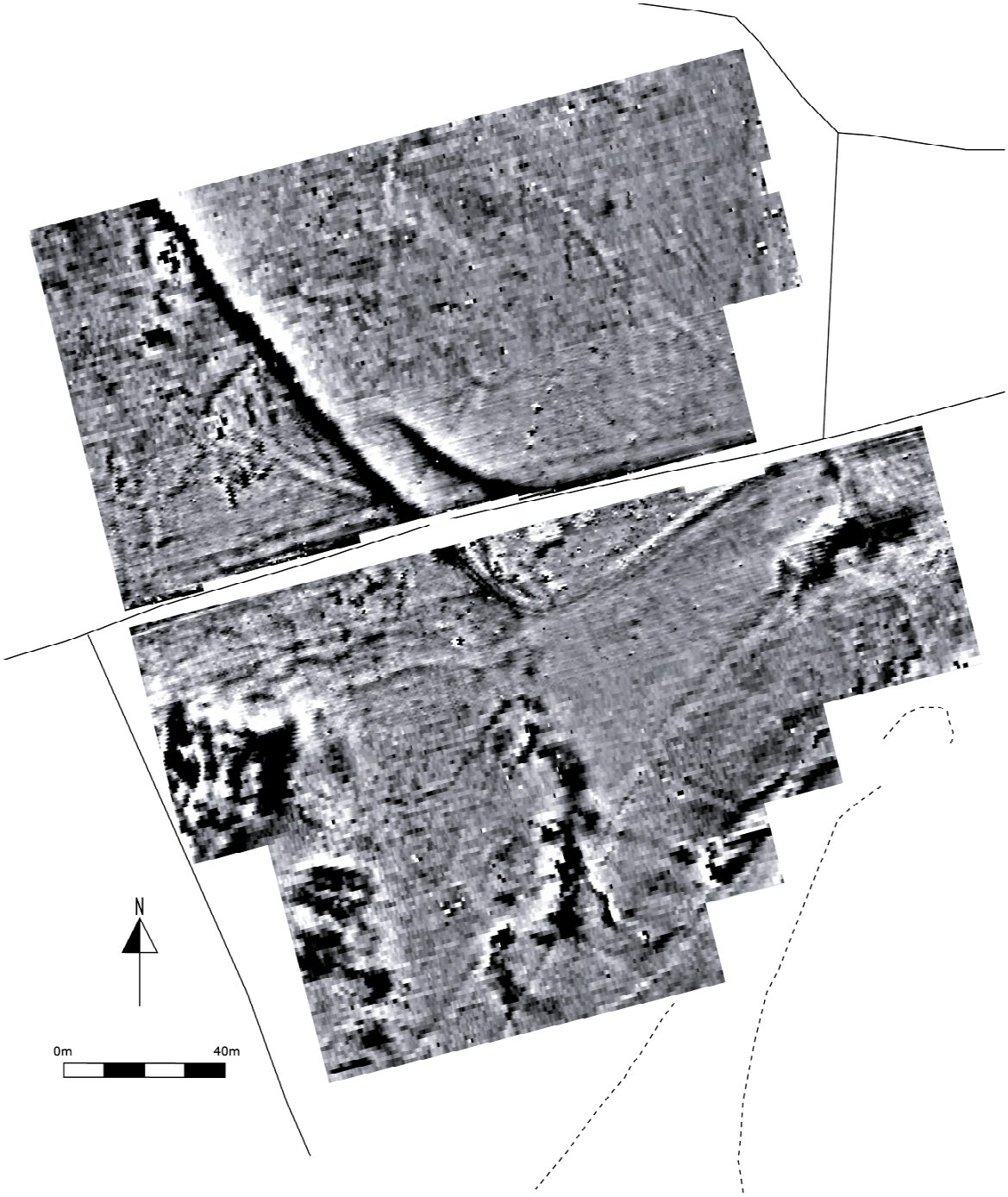

Figure 9: Combined geophysical survey results, presented as a greyscale plot overlaid on local topographical features.

Figure 10: Interpretaion of the geophysical survey results.
The numbers relate to those on pp.6-9.

Photo 1: General shot looking west across the survey area.

Photo 2: General shot looking west across the southern field with Ramsey Island in the background.

Photo 3: View facing north of the remains of the chambered tomb PRN 263, showing the possible chamber/passage in front. 2 x 1m scale.

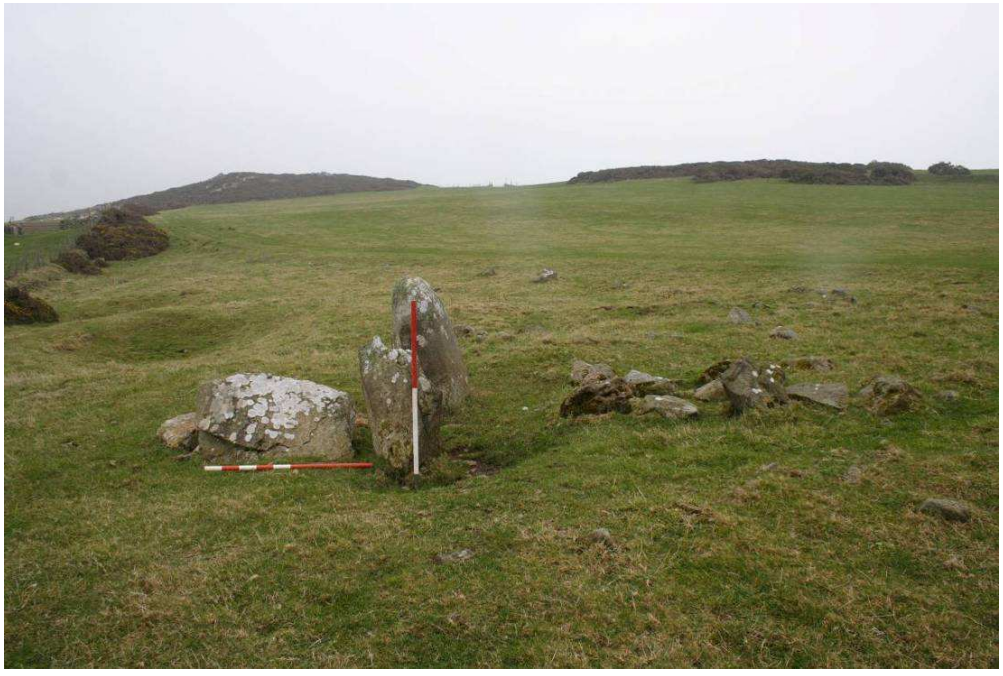

Photo 4: View facing east of the remains of the chambered tomb PRN 263. 2 x 1m scale.

Photo 5: View facing south of the remains of the chambered tomb PRN 263. 2 x 1m scale.

Photo 6: View facing west of the remains of the chambered tomb PRN 263. 2 x 1m scale.

Photo 7: View facing east of the earthwork hollows adjacent to the chambered tomb. 2 x 1m scale.

Photo 8: View facing west of the earthwork hollows adjacent to the chambered tomb. 2 x 1m scale.

APPENDIX 1: Methodology and instrumentation

Geophysical Survey Instrumentation

A fluxgate gradiometer survey provides a relatively swift and completely non-invasive method of surveying large areas.

The survey was carried out using a Bartington Grad601-2 dual Fluxgate Gradiometer, which uses a pair of Grad-01-100 sensors. These are high stability fluxgate gradient sensors with a 1.0m separation between the sensing elements, giving a strong response to deeper anomalies.

The instrument detects variations in the earth's magnetic field caused by the presence of iron in the soil. This is usually in the form of weakly magnetised iron oxides, which tend to be concentrated in the topsoil. Features cut into the subsoil and backfilled or silted with topsoil therefore contain greater amounts of iron and can therefore be detected with the gradiometer. There are, however, other processes and materials that can produce detectable anomalies. The most obvious is the presence of pieces of iron in the soil or immediate environs which usually produce very high readings and can mask the relatively weak readings produced by variations in the soil. Archaeological features such as hearths or kilns also produce strong readings because fired clay acquires a permanent thermo-remnant magnetic field upon cooling. This material can also get spread into the surrounding soil leading to a more generalised magnetic enhancement around settlement sites.

Not all surveys produce good results as anomalies can also be masked by large magnetic variations in the bedrock or soil or high levels of natural background "noise" (interference consisting of random signals produced by material within the soil). In some cases, there may be little variation between the topsoil and subsoil resulting in features being un-detectable. It must therefore be stressed that a lack of detectable anomalies cannot be taken to mean that that there are no below ground archaeological features.

The Bartington Grad601 is a hand-held instrument and readings can be taken automatically as the operator walks at a constant speed along a series of fixed length traverses. The sensor consists of two vertically aligned fluxgates set 1.0m apart. Their Mumetal cores are driven in and out of magnetic saturation by an alternating current passing through two opposing driver coils. As the cores come out of saturation, the external magnetic field can enter them producing an electrical pulse proportional to the field strength in a sensor coil. The high frequency of the detection cycle produces what is in effect a continuous output (Clark 1996).

The gradiometer can detect anomalies down to a depth of approximately one metre. The magnetic variations are measured in nanoTeslas (nT). The earth's magnetic field strength is about 48,000 nT; typical archaeological features produce readings of below 15nT although burnt features and iron objects can result in changes of several hundred nT. The instrument is capable of detecting changes as low as 0.1nT.

Geophysical Survey Data Collection

The gradiometer includes an on-board data-logger. Readings in the surveys were taken along parallel traverses of one axis of a grid made up of 20m x 20m squares. The traverse intervals were either 0.5m or 1.0m apart. Readings were logged at intervals of 0.25m along each traverse giving 3200 readings per grid

square (medium resolution on 0.5m traverses), or 1600 readings per grid square (low resolution on 1.0m traverses).

Geophysical Survey Data presentation

The data was transferred from the data-logger to a computer where it was compiled and processed using ArchaeoSurveyor 2.5 software. The data is presented as grey-scale plot where data values are represented by modulation of the intensity of a grey scale within a rectangular area corresponding to the data collection point within the grid. This produces a plan view of the survey and allows subtle changes in the data to be displayed. A separate grey-scale plot with interpretation of the main features is also included as necessary.

Geophysical Survey Data Processing

The data is presented with a minimum of processing although corrections are made to compensate for instrument drift and other data collection inconsistencies. High readings caused by stray pieces of iron, fences, etc are usually modified on the grey scale plot as they have a tendency to compress the rest of the data. The data is however carefully examined before this procedure is carried out as kilns and other burnt features can produce similar readings. The data on some noisy or very complex sites can benefit from 'smoothing'. Grey-scale plots are always somewhat pixellated due to the resolution of the survey. This at times makes it difficult to see less obvious anomalies. The readings in the plots can therefore be interpolated thus producing more but smaller pixels and a small amount of low pass filtering can be applied. This reduces the perceived effects of background noise thus making anomalies easier to see. Any further processing is noted in relation to the individual plot.

Reliability

Geophysical survey is an immensely useful tool but it should be realised that while a survey will detect a wide range of features, it may not detect *all* buried features. A gradiometer survey detects changes in magnetic flux density and relies on there being a detectable difference between the archaeology and the substrate. This may not occur for many reasons (e.g. a cut feature being backfilled with subsoil). It must therefore be stressed that a lack of archaeological responses from a geophysical survey does not prove that there is no archaeology present.

Grid locations

The survey grids were located by measurements to fixed points such as cliff edges and metal survey markers located during the survey (Fig 4: A2, B and B2).

Bibliography

Clark A J 1996 *Seeing Beneath the Soil* (2nd edition). Batsford, London

LOWER TREGINNIS CHAMBERED TOMB, ST DAVID'S TOPOGRAPHICAL & GEOPHYSICAL SURVEY 2011

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

Philip Poucher

Swydd / Position: Archaeologist

Llofnod / Signature .....  ..... Dyddiad / Date: 31/03/11

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

ar ran Ymddiriedolaeth Archaeolegol Dyfed Cyf.
on behalf of Dyfed Archaeological Trust Ltd.

Swydd / Position:

Llofnod / Signature  Dyddiad / Date: 31/03/11

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

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

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