ARCHAEOLOGICAL INVESTIGATION AT HARTLAND, DEVON

EXPLORING ARCHAEOLOGY PROJECT

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A Report for

The Hartland Society

ARCHAEOLOGICAL INVESTIGATION AT HARTAND, DEVON

By

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The views and recommendations expressed in this report are those of the projects team and are presented in good faith on the basis of professional judgement and on information currently available.

Cover illustration

Resting during a geophysical survey at The Warren, Hartland, 2008 (Photograph by Stephen Hobbs)

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Abbreviations

HER	Historic Environment Record
NGR	National Grid Reference
OS	Ordnance Survey
XArch	Exploring Archaeology Project
NDAS	North Devon Archaeological Society

1 Summary

After outlining the history of Hartland, this report describes the results of a geophysical survey and an evaluation excavation at The Warren, Hartland, Devon (SS 22 25), and geophysical surveys at Hartland Abbey (SS 242 251), Higher Warren Field and Sheeplace (located directly south of The Warren) The magnetometry surveys and excavation was undertaken by Exploring Archaeology Project (XArch) (funded by the Heritage Lottery Fund and Exeter University) along with members of The Hartland Society and North Devon Archaeology Society. The geophysical surveys were conducted on request by members of the Hartland Society and North Devon Archaeological Society as training exercises in geophysical surveying and as means to record the archaeology in various locations within the parish of Hartland that had already been identified as areas with archaeological potential. The resistivity survey was undertaken by members of the Hartland Society and North Devon Archaeological Society.

The results from the geophysical survey at The Warren were used to locate an anomaly suitable for excavation. The excavation was a community archaeology initiative designed to answer specific questions whilst providing local people with the opportunity to take part in an archaeological excavation.

The geophysical surveys revealed a number of anomalies that are possibly associated with both prehistoric and historic activities in various locations in The Warren. The excavation focused on investigating one of two elongated ditch features in The Warren to determine whether the features indicate the presence of a long barrow or medieval pillow mound. Unfortunately, the restricted nature of the excavation failed to determine the nature of this feature, however, it does highlight the archaeological potential of The Warren.

2 The Manorial and Monastic Estates of Hartland by Stephen Hobbs

The Hartland geographic area formed a part of the greater Saxon Royal Holding in the West Country. The settlement of Hartland was considered as one of the Burghs of Alfred by Hoskins[i]. It passed through the female Royal line up to the Conquest. The Domesday survey records the transition of ownership from Queen Edith to the new King William. At an uncertain date[ii] in the 12th Century the Manor of Hartland was gifted by the King to the De Dinham family.[iii]

The greater Hartland Manor had four satellite manors within its overall geographic bounds, Milford, South Hole, Meddon and St Nectan (Stoke). These were held independent of the De Dinham Hartland manor. Milford and Meddon are still independent of Hartland whilst South Hole and St Nectan had been subsumed into a single ownership in the 18th Century.[iv]

An early division of the parish occurred when Gytha mother of King Harold and wife of Earl Godwin established a religious settlement of secular canons reputedly as thanksgiving for the saving of her husband's life.[v] The land given is by some taken to represent the bounds of Nistenstock or Stoke St Nectan. If this manor existed prior to the gift or if the gift established the manor is not clear, but in Domesday it states that Nistenstock was held by Girold the Chaplain and the [secular] canons of him (1086)[vi]. This would seem to confirm that Nistenstock was considered as a separate entity at that time.

The secular canon were replaced by a regular order in 1169 under the movement common at that time and was initiated by Richard of Ilchester[vii]. This started the establishment of the monastic household. Charles Thomas and Susan Pearce (Thomas 1994, 175) have both suggested that the original religious house was coincidental with the compound now occupied by the Church of St Nectan at Stoke. Documentation may suggest that the community moved to Marcedon Farm whilst building the new Abbey in the valley below Stoke – the site of the present Hartland Abbey House.[viii]

This division of the parish of Hartland has to be seen as (a) the Manorial and (b) the Monastic.

2.1 Manorial

The status of the De Dinham family has to be appreciated over the longer term, from the uncertain beginnings their importance was such that the gift of the second largest parish in Devon was seen as appropriate, albeit in the northern extremities. The Domesday survey also reveals a number of other manors in which the De Dinhams held an interest[ix].

The manorial parish of Hartland was divided for administrative purposes into three areas; Castle, Hind Harton and Butterbury. This has been suggested as being based on an early delineation taking the natural features of the landscape, particularly the rivers, as points of separation of the administrative areas.[x] This delineation continued as a feature of the 'gathers' (Church Rates, Poor Rates) of the churchwardens and parish administrators right up to the 19th Century.

Within the manorial landscape there are a number of features of the early period of the De Dinham holding (1100-1400). Two stages of Deer Parks, The Right of Warren, Fish

Ponds, A licence to crenellate (1201), a Manorial Borough (1290), a monastic foundation (1169) and the substantial parish church all dating from the c.13th Century.

There is an ongoing debate to be had on the existence of a building on which a licence to crenellate would apply. Chope suggested such a building would have been sited at what is today Blegbury. He used the evidence of the field names in that location, but avoided the presence of similar names in other parts of the northern administration area – 'Castle'. A new reading of the evidence of the *Inquisitions of the De Dinhams* [xi] would suggest that the assumption of a physical castle in the administrative area known as 'Castle' is wrong and that the primary building would sit better in the manorial landscape at the western fringe of the borough town of Harton[xii]. Documentary evidence would seem to add weight to this as a sequence of property leases refer to the Great House in such a position in the borough.

The evidence in the landscape and the status of the De Dinham family together form all that may be expected of a prime high status location. Fortunately sufficient documentation survives[xiii] of the early manor and the family and from this it is possible to recreate the manor and its activities[xiv]. The De Dinham family transferred their main residence from Hartland to Kings Kerswell (Carswell) in south Devon in the 14th Century. Then shortly after the death of a beloved Dinham wife, the husband moved the main estate to Nutwell on the east bank of the river Exe. This appears to have happened before 1394 this date being the inscription date on the tomb effigy at St Mary's church, Kings Kerswell[xv]. The Hartland estate, once the family had removed as their main residence, then became effectively the main farming unit provisioning the family[xvi] and providing sport, but perhaps declined in terms of its primary status. This is possibly reflected in the loss of the main residence, the incomplete parish church and the gradual decline in status of the borough.

The death of Lord Dynham (De Dinham) in 1501, with no legitimate male heir[xvii], meant the estate was divided equally between the families of his four surviving sisters[xviii]. The Arundell family, already heavily involved in the west-country, became, in effect, stewards of the estate on behalf of the heirs. Over time, gradual land sales took place and the manorial estate became dispersed.

2.2 Monastic:

The establishment of the monastic house in 1169, at the instigation of Richard of Ilchester, had the benefit of substantial gifts of land and resources, both spiritual and temporal. This included the manor of Nistenstock or Stoke St Nectan now Stoke. The only firm evidence for the extent of the land holding comes from the documentation of the dissolution of the house in 1539[xix]. The lease and eventual sale to a William Abbot in 1546 details the extent of the land transferred, with any customary manorial rights. However, the King retained the office of Lord of the Manor of Stoke, which he sold at a later date to the Docton family of Hartland[xx].

Little is known of the operation of the monastery, its finances or success[xxi]. It has often been promoted that this was a house apt to be ill-kept, this based on the small amount of correspondence within the Exeter Diocese archives. This may not be an accurate portrayal as the lack of correspondence would seem to show otherwise – the lack of need to intercede. Indeed the financial returns that are available show The Abbey of St Nectan to have sufficient income to place it at the top of the table of the smaller houses in Devon at the dissolution (£306 p.a.)[xxii].

The Abbot of Hartland and his supporters, at the dissolution, tried to resist, but in preparation had already dispersed some of the land and assets of the Abbey to the use of their supporters on minimal or peppercorn rents. The commissioners complained that much of the property and effects of the Abbey had disappeared (a comparison with the Monasticon?).These tenancies existed into the tenure of the eventual purchasers of the Abbey Estate and in some cases the right to alienate the land was obtained[xxiii]. It is not known how the commissioners treated the Abbey buildings once they gained occupation although it is known that the lead from the roofs was sold. This would indicate that as in other places they reduced the religious building to semi-ruin therefore preventing an easy route to reinstatement. We could therefore consider that on accepting the Abbey from the Crown the Abbot family would have as accommodation only the Abbot's House and various non-religious outbuildings. It would appear from illustrations of the early 18th Century that some aspects of the Abbey lingered on for many years[xxiv].

The Abbey estate was effectively a ring-fenced unit on the central high ground running west-east from the coast at Stoke as far east as Backsworthy. The estate passed relatively intact through successive heirs: Abbott to Luttrell. The marriage of Paul Orchard to Mary Luttrell, the heiress of the Abbey Estate (1704), signalled a major expansion in wealth through property. Paul Orchard was heir to his family estates based on Aldercombe Farm and the parish of Launcells in north Cornwall. His father had held the post of Collector of Customs for the south west ports and was based at Exeter. He had amassed an estate that covered a large swathe of the north Cornwall and west Devon parishes, primarily from Holsworthy in the east to Morwenstow in the north and St Ginnis in the south. This property on marriage was combined with the Hartland estate and later, through further marriages of Paul Orchard (father and son both named Paul), would extend into London, Wales and Ireland.

The value and income from the enlarged estate enabled Orchard to display his status and he embarked on a range of improvements. He carried out alterations to the western end of the Abbey house in the Queen Ann style and in 1770, the second Paul Orchard, demolished much of the remaining structure and built the present building. In 1845, further enhancements were undertaken by Sir George Stucley and the building remains today as it was in 1845[xxv].

Enhancements to the grounds have included a coach-drive[xxvi] exiting in the town of Harton, formal gardens, woodland gardens, bog gardens and a fernery.

The dispersal of the manorial estate after the death of Lord Dynham in 1501 and the transfer into private hands of the ex-monastic estate in 1539 presented a complex pattern of ownership within the parish of Hartland. Over time the land sales, leases and exchanges between all the main parties saw the old manorial lands fall into freeholds, whereas the Abbey Estate added further properties to its rent roll. Of particular interest is the gaining of the title 'Lord of the Manor of Stoke' by the Orchard Family[xxvii] as this brought with it the various rights of the manor[xxviii], including the wastes and commons. This change may hide the original extent of either the manorial or monastic landholding and we now see an unclear mix of both landscapes.

The documentation held in the Hartland Abbey Archive is detailed on many aspects of the estate management from 1540–2000. These documents can be obscure and not always indicate the full extent of the works carried out either on the house or lands. The Orchard family appear to have been heavily involved in hunting and a feature of all their legal tenancy papers is the reservation of all rights to hunt, fish, chase game etc over all their

lands. It was also common for tenants to be obliged to provide keep for hawks and hounds and also maintain the access for hunting on their tenements.

It is suspected that Stoke Barton Farm, the alleged Abbey barton holding, was the subject of a major re-enclosure c.1700[xxix]. The effect of such works can be seen by comparing the field systems of the surrounding Abbey tenements and those of the manorial Hartland tenancies with the field systems on the Barton Farm. The reason for this is unclear but could be the result of extensive sheep ranges, a residue from the monastic period, being transformed into alternative agricultural practices such as cereals or cattle[xxx]. When this change took place it was common practice for Paul Orchard, to include hunting gates and access within the new hedges. The hedges that bounded the coastal scrub lands were all formed as Corn Ditches including some doubles to enhance the hunting whilst protecting the farm lands. Pottery gathered from within the centres of sample hedges have been dated to the 18th Century.

If we can view the Hartland Abbey Estate as being engaged extensively in hunting then this is an extension of some of the extant features of the medieval landscape. The deer parks have been absorbed into the greater park land rides, the site of the park keeper's house on the bounds of the older deer park is now agricultural land. The deep park marked on the Ordnance Survey maps lying west of the Abbey buildings is a 19th century development as is possibly the adjacent fish pond. The cliff top Warren Ground was not heavily cultivated until post World War II and therefore retained some of its early features, the possible Warrener's House becoming a romantic ruin. The Swannery Pool, first mentioned in Dean Milles parochial survey of 1750[xxxi] as belonging to 'The Abbot' has extant much of the canalisation banking of the Wargery Water stream[xxxii], the extensive earth bank dissecting the valley at its north end was created in 1760 and is not part of the early pool[xxxiii]. An interesting point is that in extant documentation no mention is made of the use of venison, coney or swan within the De Dinham accounts, although the presence of water fowl is well attested as is various fresh and salt water fish. A particularly detailed list of provisioning exists for the funeral of the Dinham wife buried at King's Kerswell[xxxiv]. This could be seen as adding support to the comment in the Dean Milles survey that the Swan Pool belonged to the 'Abbott' but no documentation exists on this aspect of the Hartland household's diet.

It is the questions on the improvement of the estate that forms the central reason for the present investigations (Hartland Study Group, Hartland Society, NDAS and XArch), to establish the extent and condition of the manorial landscape, the change in agricultural practices as seen in the landscape, the extent of the sub-terrain residue of the original Abbey and the beautification of the Estate from 1700.

2.3 Investigations undertaken: by Stephen Hobbs and The Hartland Study Group

- Mapping the two Deer Parks
- Survey of the Swannery and its setting
- Walk through of the Blagdon Fish Ponds
- Landscape study of the Coach Drive
- Geophysical study of the Abbey parkland

- Geophysical study of the Warren grounds and adjacent fields
- Hedge Survey of the Barton Farm
- Document survey (ongoing)
- Landscape study of the Manorial Borough of Harton.
- Survey of the site of the Park Keepers House (with the Small School)
- Excavation to investigate possible artificial Warrens
- Wilson, R. 2007 *Investigation of the landscape of Barton Farm, pre 1950 drive for food, in relation to the relict prehistoric landscape.* Unpublished dissertation; North Devon College and University of Plymouth: Barnstaple.

2.4 Footnotes

Devon and its People. Hoskins W.G. David & Charles 1968

[1] No documentation has been found to establish the firm date; researchers have always fallen back on the first instances of the De Dinham in England as being the activities associated with Nutwell, South Devon c.1164. See Jankulak; The medieval Cult of St Petrock – Boydell – 2000 for the more complete notation on the Dinham family

[2] See Transactions of the Devonshire Association Vol 34: Chope. R. P. for a fuller description of the early manor

[3] See correspondence between Sir Dennis Stucley and Mr Waddon-Martyn re disputed ownership c.1968 - Hartland Abbey Archive/HaB-T12-057

[4] See Chope. R. P. –Book of Hartland – Torquay -1940. p.54.

[5]Jankulak p.169

[6] Chope 1940 p.54

[7] See documentation on the formation of the Abbey. Chope p.55/6

[8] Manors held by Dinhams – Harpeford; Matford; Bolberry; Abbots Bickington; Nutwell at 1086 (Phillimore –Devon DB, 1985)

[9] See The Saxon Boundaries of Hartland Hundred -Stephen Hobbs (NDAS Newsletter No 12 2006) or http://www.ndas.org.uk/interests.htm

[10] Cal. Of Inq. P. m., III. 253, 329; particularly – Cal. Of Inq. P.m.,IV, No44. ; Cal. Of Iq. P. m., VII. No 462. Chope 1940

[11] Pers. Comm. in Email correspondence with Dr. Oliver Creighton.

[12] Cornwall Records Office – Arundell record deposit AR/4/1004 – AR/4/2180

[13] See The Dinham Family in the Later Middle Ages – Klieneke. H. 1998 –Unpublished PhD Thesis – University Of London, Royal Holloway

[14] http://newsgroups.derkeiler.com/Archive/Soc/soc.genealogy.medieval/2005-09/msg00286.html seen 26/02/2009 Or Some Old Devon Churches, Stabb. J. Simpkin & Marshal. Torquay. 1908

[15] Klieneke

[16] An illegitimate son was eventually successful in claiming the title and held a small estate in east of England.

[17] A fifth sister had died childless pre 1501 and was thus not included in the inheritance.

[18] Hartland Abbey document archive

[19] See correspondences Stucley-W.Martyn

[20] No known document archive exists for the Religious House

[21] Only Plympton (£912), Tavistock (£902), Buckfast (£466), and Torre (£396) exceeded it Hartland of the Devon Houses. Launceston at £354 was the highest income in Cornwall.

[22] A tenement known as Mansley at Elmscott was transferred (in 1549) to the Prust family who had held it on peppercorn rent since pre dissolution. Hartland Abbey Archive: HaB/DC-001

[23]Chope. 1940

[24] See www.hartlandabbey.com/architecture.htm seen Feb 2009

[25] See Coach Drives of North Devon – Hobbs –N.D.C./University of Plymouth unpublished dissertation 2007

[26] Sir Dennis Stucley in his correspondence with Wadden-Martyn explains that a marriage between the Docton and Orchard family had enabled the transfer (cousin to cousin).

[27] The Abbot of the monastery of St Nectan claimed and had acknowledged extensive rights of the manor including all courts, hanging but had excluded the rights of bread as it was said the manor never had a bakery.

[28] Possibly following the purchase of the rights as Lord of the Manor of Stoke.

[29] The agricultural improver John Exter was a tenant of the Barton Farm, he is buried at St. Nectan's Church which also has a plaque to his memory.

[30] Westcountry Studies Library, Exeter

[31] Field walking has produced numerous finds from the gravels of the stream which due to its remote location would indicate the presence of a dwelling in the close proximity.

32 See Hartland Abbey Archive, meeting of the [hunting] committee held at Hartland Quay to discuss the damage of the recent floods. '…The water has washed away the hound kennels in the hunting marsh and caused much damage. To prevent any such happening again a bank 60' long and 10' high should be built across the valley…' 1760

2.5 Bibliography

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Transactions of the Devonshire Association

3 Geophysical survey of Higher Warren Hill and Sheeplace, Stoke Barton Farm, Hartland

by David Miller

The geophysical survey of the Higher Warren Hill and Sheeplace were conducted on request by the Hartland Society as part of their continual research of the history of Hartland. The survey was conducted in May 2007 with the help of members of North Devon Archaeological Society and the Hartland Society (Figure 2).

3.1 Higher Warren Hill (Area 1)

3.1.1 Methodology

A Bartington Grad601-2 gradiometer was used to survey the area with readings taken using a transverse separation of 1m interval of 0.25m.The area was divided into 20 by 20 meter grids and the direction of first traverse was southeast as it was thought that this would be an easier direction of travel considering the slope. Some difficulty was caused by the gradient of the field in both the south and western directions. The field was surveyed in a single day and a total of 21 grids were walked.

The results are presented as raw and processed data and in grey scale (Figures 5 and 7).The data was processed using Geoplot and following processes where used for both sets of data; De-stagger, Zero Mean traverse, Zero Mean Grid, High Pass Filter, Low Pass Filter and finally Interpolate.

3.1.2 Results and Interpretation (Figure 7)

The most prominent feature to appear on the composite image is a double ditch and bank system running east west across the southern half of the field. The change in the ground was also detectable when walking over the feature and it could also be seen as a 'crop' mark from Sheeplace. It appeared as a distinctive green band running across the field but did not seem to continue into the adjacent field; instead it seemed to terminate at the stone wall. Stephen Hobbs believes that the feature is the remains of a hedge system that is recorded on the Tithe map and the first edition OS map (Figures 2 and 3).There is also a ditch running North-South along the field but this seems to be cut by the hedge feature and would therefore predate it. Finally, there is a white band that runs in a curve from near the top of the ditch south-westwards to the hedge and possibly continues beyond it. Again this feature is cut by the double band and ditched 'hedge'. There are also some strange oval shapes protruding from the white feature, there is some suggestion that features like this occur on Bronze Age reeves found on Dartmoor (Sean Hawken *pers. comm.*).

3.2 Sheeplace (Area 2)

3.2.1 Methodology

This field was partially surveyed on the second visit to Hartland. The area surveyed is fairly flat but rises away southwards up to a hill, at the top, there is a single standing stone.

A Bartington Grad601-2 gradiometer was used to survey with readings taken using a transverse separation of 1m interval of 0.25m.The area was divided into 20 by 20 meter grids and the direction of first traverse was west. The grids were marked out 10m directly south of a telegraph pole, which acted as a fixed point. Three parallel rows were then set directly west making a total of 21 grids surveyed.

The results are presented as raw (Figure 5) and processed data and in grey scale (Figures 6).The data was processed using Geoplot and following processes where used for both sets of data; De-stagger, Zero Mean traverse, Zero Mean Grid, High Pass Filter, Low Pass Filter and finally Interpolate.

3.2.2 **Results and Interpretation** (Figure 7)

The North East corner is interesting because it contains almost no archaeological disturbance, but this is a result of partial water logging of this area. Most of the features that occur seem to result from recent land modification. The strong readings in the far west of the surveyed area, around 50nT, could be a result of burning on the site. Anomaly 4 is fairly fragmentary, but could be another double ditch and bank hedgerow similar to the one in Higher Warren Hill. One feature that is interesting is the curved bank. This feature was noticeable while walking as a slight and sudden rise in the ground. There is also a possible break in the bank which may be some kind of boundary with an entrance, but we would have to survey more of the field to know more.

4 Geophysical Survey: Hartland Abbey,
by Tim Robinson

4.1 Background

Only one mile from Hartland Quay, Hartland Abbey lies across a narrow, sheltered valley on the rural North Devon coast. Hartland Abbey is the lived-in family home of the Stucley family. It was built in 1157 and consecrated by Bishop Bartholomew of Exeter in 1160AD as a monastery of the regular canons of the Order of St Augustine of Hippo. The Abbey remained as a monastery until 1539 when it became one of the last monasteries in Devon to be dissolved by Henry VIII. The King gave the rental of the Abbey to the Sergeant of his Wine Cellar at Hampton Court, Mr. William Abbot as a gift. William Abbot then bought the property for £620 (www.hartlandabbey.com/history).

The current abbey house is a rebuild and the purpose of the survey was to try and locate the original abbey buildings. It is thought that during the dissolution the original abbey house was reduced to non religious buildings such as the abbot's house, kitchens and work rooms. This has been partially confirmed by an account for the sale of lead from the roofs in 1540. In the eighteenth century formal gardens were installed over what is presumed to be the old abbey buildings. However, the designs of these gardens are not indicated on the Tithe Map. In fact the gardens to the west and east of the current abbey are referred to only as Paddock (west lawn) and woods (east lawn) (Figure 2 and 8).

The area surveyed were the two lawns on either side of the current abbey house. These have been labelled as the East and West lawn simply due to their location geographically in relation to the house. The west lawn is 80m long in a N-S direction and 45m long in an E-W orientation. The east lawn is of similar proportions with the only differences being that it is 5m longer in each direction.

Aerial photographs revealed what appears to be earthworks or shadow marks of a set of rectangular buildings in the east lawn. The photograph of the west lawn did not appear to show any obvious building marks but did have some form of lines and shapes which could have been shadow marks from the ornamental gardens. The 2000 millennium aerial photos did not reveal anything more, but did show that the owners of the house had constructed a tennis court in the east lawn, directly over the buildings shown on the photograph from 1946 which was very unfortunate. This could heavily disrupt the data results from the survey. There has been no previous work on site of this scale and hopefully it should reveal whether the old abbey buildings are located beneath these two lawns.

4.2 Methodology

The survey was conducted in March 2008 with the help of Adam Jones, Alistair Black and members of North Devon Archaeological Society and the Hartland Society (Location geophysical survey see Figure 2)

The gradiometer survey used a datum point set on the northwest corner of the existing residential building with grids triangulated off a line parallel with the west face of the building range. The west lawn grids incorporated the area of gravel in the survey, whereas on the east lawn, it was decided to commence the survey from a parallel line off the building on the east side of a parade of bay trees thus negating the effect of the drive. (Hobbs *pers comm.*)

Bartington Fluxgate Gradiometer 601-2 system was used to survey both areas at a transverse separation of 1m interval of 0.125m. In total, 11 grids in the west lawn and 9 in the east lawn were surveyed. Whilst the east lawn was the larger of the two lawns, it had a metal fence along its far edge to contend with, it also had some very rough ground running parallel to the fence about 5m in width which was quite treacherous underfoot and rather waterlogged on the day of the survey.

Upon completion of the survey the data was processed using the Geoplot 3.0 Progam. Processing methodology consisted of clipping -20/+20, zero mean traverse, low pass filter, zero mean grid and interpolate. The final process was to destagger the data. The results are presented as raw (Figure 9) and processed data (Figure 10) and in grey scale.

4.3 Results

The white areas within the survey are sections which could not be walked due to obstructions such as buildings, sheds or trees. In the west lawn there was a shed in the NE corner and a large stone garden feature in the NW. Over the two lawns large trees also got in the way which accounts for the rest of the white areas. To the NW of the lawn is another metal fence.

4.3.1 **Results and interpretation- West lawn** (Figure 11)

Anomalies 1 and 2 are evidence of recent disturbance to the lawn. Three linear anomalies probably result from modern pipes. To the north of the most easterly linear anomaly is a is a cast-iron water pipe (Hobbs *pers. comm.*).

At the north end of the survey is a highly disturbed area. The current landowners put down a gravel track along this edge of the field, but laid down some form of plastic matting, held in place with large metal pegs overlain by the gravel. The gradiometer has picked this up quite nicely and because it was made known to us, we can discount it as archaeology.

Anomaly 3 is an area with an intermittent series of contrasting low and high readings. Such readings are usually indicative of stone or where the ground has been highly disturbed. The irregular pattern and shape of this anomaly suggests that it could have been part of the ornamental gardens that has now collapsed over time. That area is also littered with trees which could also be a cause of this disturbance.

4.3.2 **Results and interpretation – East lawn** (Figure 11)

Anomaly 4 is a linear feature and due to the large amount of high readings running along it in an almost uniform line it is probably another drain. Furthermore the ground is also heavily disturbed strongly indicating the recent laying of a pipe. There are a lot of low readings forming a linear feature (anomaly 7) which may suggest the presence of stone. These stones have perhaps fallen from the original abbey buildings or they could be part of the 18th century ornamental gardens and is dissected by the more recent drain.

Anomaly 5 is a series of several faint linear anomalies located along the southern area of the survey that could be part of the ornamental gardens. Two of the linear features are parallel and possibly are the remains of a double ditch.

Anomaly 6 is a series of pit/posthole that are probably associated with the tennis court. Six of them represent post holes for putting up a net to stop tennis balls from going into the stream or into the road. Anomaly 8 is a faint circular feature located on the east side of the modern pipe and could be part of the ornamental gardens.

4.4 Discussion and conclusion

This geophysical survey had the potential to reveal a great deal of information concerning the original Abbey built at Hartland. I would say though that the survey work has not been conclusive enough to say 100% whether the lawns were the actual site of the original abbey. Due to construction of ornamental gardens in the 18th century and the modern pipe work which is evident in both lawns, there has been too much disturbance of the ground. Whilst faint traces of what could have been buildings are picked up in the east lawn, nothing is particularly clear or anything that could be obviously classified as a building. The work has highlighted that the East Lawn has the most potential for the old abbey remains which would support the aerial photography evidence from Devon HER.

My recommendation for further work would be the use of a resistivity survey which is not as heavily affected by modern metal as the gradiometer. This form of survey is also more suitable for picking up masonry remains if they are heavily disturbed by other features such as it is at Hartland. Whilst not revealing what was hoped for, the survey has been useful in revealing the location of modern work which can be avoided if any future archaeological survey or excavation takes place and confirms the presence of other modern features such as the matting in the west lawn and the post holes for the tennis net in the east lawn.

5 Resistivity Survey of the east lawn, Hartland Abbey by Stephen Hobbs

The resistivity survey was undertaken by Stephen Hobbs and Derry Bryant as members of the North Devon Archaeological Society. The results were interpreted with assistance of Dr. Penny Cunningham. The survey was completed during May and June 2008 during periods of settled metrological conditions.

5.1 Background

The foundation of an Abbey at Hartland is well attested within the local history of the area[1] and repetition is not needed here for the purposes of this investigation.

The configuration of the range of buildings that formed the Abbey is unknown and any reference to such has been conjecture based on comparisons with other such similar institutions and artistic impressions. Since the Abbey passed into secular ownership, following the Dissolution, it is known to have undergone a number of re-modellings. In 1704, Paul Orchard carried out alterations to the southern end of the house in the Queen Anne style. Later in the 1770s his son, the second Paul Orchard, carried out a major reconstruction of the house. The Chapel and the Great Hall were demolished and he levelled the main body of the house to the height of the cloisters on which he built three large reception rooms with a row of guest bedrooms above. Along with a classical Strawberry Hill facade the project was completed in 1779. In 1845, Sir George Stucley carried out further alterations. The Drawing Room, Dining Room and Billiard Room were redecorated and two bay windows were added[2]. Within the Abbey document archive the marriage settlement between the Luttrell and Cotton families relate the names of a small number of the rooms and offices of the Abbey c.1583 in particular Sir Harry's chamber off the lower passage[3].

A number of paintings, prints and documents exist which allude to the Abbey in its various changes, if these are architecturally correct is not known (see footnote 1). It is a purpose of this investigation to try and establish the extent of the residue of the footprint of the buildings and reveal to what extent artistic presentation mirrors archaeological evidence.

[1] See R. Pearse-Chope, 1940, The Book of Hartland, Torquay for detailed account of foundation and description of the buildings.
[2] Hartland Abbey Website www.hartlandabbey.com viewed July 2008.
[3] HaB-DD-013 Hartland Abbey Digital Archive source

5.2 Methodology

The grids were triangulated from a parallel line off the building on the east side of a parade of bay trees. For reasons of probe penetration, the tennis court was recorded with dummy data entries.

Resistivity equipment consisted of a Geoscan Research RM15-D and the collected data was processed using Snuffler/Geoplot 3 software operated by Stephen Hobbs. The machine was set at 1x gain, 37Mzh local filter, remote probe reading of 107 (+/- 10), 0.5m data sample (y axis) and 1m traverse (x axis) in a parallel walk pattern - east.

It was considered that the resistivity may be a more appropriate form of geophysics over this site (see 4.4) and an initial test square was completed over a representative area of the east lawn northwest of tennis court (Figure 12). The pilot scan indicated that there are areas of high resistance indicative of a building line. It was then decided to complete a full scan of the east lawn area.

Due to problems with penetration of the probes it was thought impractical to cover the area of the gravel drives. In view of making a fuller comparison with the previous investigative methods and the footprint of the building c. 1750, a method of adapting the RM-15 was devised whereby a set of independent mobile probes were driven through the compacted gravel to gain a reading from the substrata. Although there is no comparative data to this method by which results could be judged, it was considered that as the method and readings would be consistent across the survey area then some validity could be achieved.

5.3 Results and Interpretation (Figures 12-15)

The use of resistivity has added extra detail to the magnetometery survey (section 4). The areas of mass stone fill (anomaly 3) known to exist adjacent to the Abbey east wall show clearly. A second area in the NW (anomaly 3) would compare with the probable position of the demolished church tower. This structure was built in a fashion that prove difficult to demolish. It was therefore undermined and collapsed into a trench. The drainage pipeline (anomaly 4) identified by Tim Robinson again shows up running north south just east of the tennis courts. The areas identified as walls (5) are in general aligned with known building residue. Item (anomaly 6) is new and could similarly be a wall structure although it appears slightly out of line with the building line. Anomaly 7 is located in an area of low wet ground and could similarly be stone fill.

It is intended to undertake resistivity on the west lawn in the near future, particularly the northern half which is the site of the stable block.

6 Geophysical survey: The Warren

6.1 Summary

In 2006, the XArch Project was asked by the Hartland Society to conduct a geophysical survey in The Warren (Figures 1 and 2). The Warren lies on the north Devon coast, situated along the main route between Hartland Quay and the main settlement of the parish, Hartland. The Warren, presently under the tenancy of Stoke Barton Farm, also forms one of the western boundaries of land belonging to Hartland Abbey. Although currently used as pasture, it has two public footpaths that run along its western and eastern boundaries. Located midway along the western side of the field stands the remains of a square, multi-story building locally known as 'the folly'. There are no obvious signs of any other building remains near the folly or anywhere else in the field, however, there is a mound located 50m to the east, approximately 25m x 20m and 1.8-0.80m high. The mound is thought to be the remains of a rabbit warren (Wilkinson 2007, 35), and is probably responsible for the name given to the field. However, the folly is not marked on the Tithe Map or first edition OS map of 1886 (Figures 3 and 4).

6.2 Aims

The aim of the survey was two fold:

- To teach members of North Devon Archaeological Society, Hartland Society and other local volunteers surveying using geophysical techniques
- To use geophysical survey to determine if the ruined folly was part of a larger building.
- To assess the archaeological potential of the site
- Engage members of the local community in appreciating and valuing their heritage.

6.3 Methodology

A Bartington Grad601-2 gradiometer was used to survey 169 grids, measuring 20m x 20m, in the southern half of the field. Some of the grid reference points were recorded with a Lecia GPS system 500 and Total Station TCR1205 (Table 3). Gradiometer readings were taken using a transverse separation of 1m interval of 0.25m or 0.125m. Due to change in the management and directorship of the XArch Project and an upgrade of the gradiometer, the survey was undertaken on several occasions by several people with reading taken at different intervals. Consequently, there is an absence of consistency in the survey methodology, grid recordings and in presentation within this report. These are less than ideal methods in which to conduct a geophysical survey and are not recommended.

Furthermore, despite recording the location of grid pegs, the gradient of The Warren has made it very difficult to accurately locate the geophysical survey onto a map (Figures 5 and 6).

The results are presented as raw (Figure 16) and processed data and in grey scale (Figures 17). The data was processed using Geoplot computer programme using the basic methods; Clip, Zero Mean traverse, Zero Mean Grid, Lower Pass Filter, Interpolate and some destaggering

6.4 Results (Figure 18)

The results demonstrate that there is a wealth of archaeology on The Warren (Figures 5 and 6). Evidence of past field boundaries can be clearly seen along with an old track/road running in a SE-NW direction. Fainter linear features with an E–W and N-S orientation are not easy to interpret but they possibly represent older boundaries or other evidence of past land use. The field boundaries on the western section of the survey area are very regular whereas the possible boundaries in the eastern half are not so. In the north eastern area of the field, the boundary becomes lost amongst a series of anomalies that are very difficult to understand. Those that appear to overlay the field boundary and are therefore of a later date, but the intermittent nature of the readings are difficult to interpret.

Two linear ditch features in the SE section of the survey are suggestive of both prehistoric bank barrows and pillow mounds. The name given to the field as 'The Warren' and the identification of anomaly 9 as a possible warren, suggest that these two linear features may also be other warrens. The nearby location of circular features could indicate the presence of further warrens, however, at least one circular feature has a possible pit in the centre which is more suggestive of prehistoric barrows than warrens. There are also other pit like features nearby.

6.5 Discussion

It is highly likely that at some point The Warren at Hartland was used as a warren and that the folly may have been a warrener's house or lodge. Although the folly has undergone 18th century redevelopment, its basic shape and design is very similar to other warrener's houses (Wilkinson 2007). Furthermore, the location of a possible rabbit warren (anomaly 9) near to a lodge is not that unusual there are many similar examples (see Williamson 2007). The geophysical survey also revealed a number of faint circular and elongated features that may also be additional warrens.

Warrens come in many different shapes and sizes, therefore the two elongated features may also be warrens called pillow mounds. Again, it is not that unusual to find different shape warrens in the same location. The geophysical results do not indicate the presence of any internal structures within the two elongated anomalies thus suggesting that if they are pillow mounds, they were constructed by creating a mound with the soil removed from the ditch that surrounds them. However, the possible rabbit warren (anomaly 9) does have some negative readings suggesting the presence of stone under the surface indicating that this feature once had an internal stone structure. After ploughing (post WWII) large flat stones where reportedly uncovered from this location (Hobbs *pers. Comm.*)

Whether the field boundaries where designed to enclose the warrens is difficult to determine, but again, this was not unusual. However, these field boundaries could result from 18th century improvements, similar to other hedges on Stoke Barton which are different to other hedges on nearby tenements (Hobbs *pers comm.*).

In addition, rabbit warrens were often located within deer parks, with the warrener's lodge placed in a position that had commanding views over the surroundings (Wilkinson 2007). The folly at The Warren would have certainly had commanding views across a large proportion of the Abbey lands. However, there are documents indicating that a deer keepers lodge and a hunting lodge were located on the edge of the deer park near to the present day village (Hobbs *pers. comm.*).

Thus the geophysical survey, along with the historical references, does tend to suggest that we have located several possible rabbit warrens. However, Wilkinson (2007) highlights the difficultly in determining the archaeological differences between pillow mounds and some Neolithic monuments. The features previously suggested as rabbit warrens have similar characteristic to both Neolithic bank barrows and Bronze Age round barrows. Wilkinson (2007) suggests that there is a difference between the shapes of the ditches that may give clue to their origins. The ditch surrounding pillow mounds typically has vertical sides with flat bases and has evidence of several phases of re-cutting, which is in contrast to the U shaped ditches of early monuments. Thus, by opening a trench across one of these ditches it maybe possible to determine its nature.

There are such a large number of anomalies within The Warren that it is likely we have evidence of land use over a very long period of time. Only further archaeological investigation targeted at specific features will be able to begin to shed some light to the types of activities that these features represent.

7 Evaluation Excavation: The Warren, Hartland

The geophysical survey in the Warren revealed a number of anomalies that are possibly associated with both prehistoric and historic activities (Figure 18). The most striking features were two elongated ditches located in the south-eastern part of The Warren that have a very distinctive shape that is suggestive of both a Neolithic bank barrow and a pillow mound. The attention was to target the excavation on the most northern of the two features, which was also the longer of the two; measuring approximately 60m by 8m (Figures 17and 19).

Both pillow mounds and bank barrow leave similar signatures, morphologically and on locational grounds, in the archaeological record that make it very difficult to distinguish between the two features without excavation (Williamson 2007). Therefore, it was decided to open an evaluation trench across the south-eastern end of the ditch to look for dating evidence and to establish the morphology of the ditch, both of which would helped to establish the nature of the feature. Further to the east of the ditch feature is a pit like anomaly that may, or may not, be associated with the ditch feature, therefore this anomaly was also an intended target.

7.1 Aims

The aim of the excavation, conducted in May 2008, was two fold: firstly, the Hartland Society wanted to engage members of the public, in particular the local communities of Hartland and Stoke, in investigating the history and archaeology of the parish of Hartland. Secondly, as the geophysical survey conducted by the XArch Project located a number of interesting features that warranted further investigation, it was decided that a small-scale evaluation excavation would help to:

- Identify the nature of two of the anomalies identified during a geophysical survey;
- Accurately record all archaeological features encountered;
- Facilitate community involvement and provide a training excavation for local volunteers and members of the Hartland Society and North Devon Archaeological Society;
- Engage members of the local community in appreciating and valuing their heritage.
- To further evaluate the archaeological potential of the site;
- To increase our understanding of past land use in Hartland.

7.2 Methods

The top soil was removed using a mechanical digger fitted with a toothless bucket. A trench 15m x 3m was opened with an east-west orientation to include a section of one of the ditch features identified in the geophysical survey (Figures 18 and 19). After the removal of the top soil, the surface was investigated by hand using mattocks, shovels and trowels. The trench, location, sections and levels were recorded using TRC1205 and GPS System 500. Archaeological features were excavated in section and recorded using standard recording methods (plans, sections and photography).

Recordings of all archaeological features were made, with each context being allocated a unique number. All cuts are presented within **[ ]** brackets, and fills/deposits within **( )** brackets.

A register of drawings, photographs, contexts, small finds, and samples were maintained during fieldwork.

All plans and sections were drawn to a scale of 1:20 and 1:10 respectively. All drawings were made on drafting film, assigned their own number and included standard information including site details, personnel, date, north arrow and scale. All drawing were scanned and digitised. Post excavation photographs were taken using a digital camera and were assigned a number using a continuous numbering system.

7.2.1 Evaluation trench

After the removal of the top soil (1) several different contexts were noted but there were no obvious archaeological features. Three areas where targeted for further investigation (Box Sections 1, 2, and 3). Box Section 1 was located in the south-western corner of the trench, extending 3.15m along the southern boundary and 1.2 m along the western end of the trench. Box Section 2 was located along the centre of the northern end of the trench, 6m from the eastern edge and 4m from the western edge, and extends 0.90m-1m into the centre. Box Section 3 was located in the north eastern corner extending 2 m along the northern boundary and 1m along the eastern end of the trench (Figures 20 and 21).

7.2.2 Collection and processing of finds

Finds that were found within specific archaeological features were bagged by context and three-dimensionally recorded and assigned a small finds number. Although found in the top soil two pieces of prehistoric pottery were sent to Henrietta Quinnell for identification (Appendix 2). Other pottery sherds were identified as North Devon ware by Alison Mills (Barnstaple Museum) and Bruce Bradley was consulted regarding a piece of flint.

7.2.3 Environmental Sampling Strategy

Samples for possible radiocarbon dating and palaeoenviromental analysis were taken where deemed appropriate. A bulk sample of approximately of 2.5 litres (50%) was removed from fill (7) for dating purposes and for charcoal identification. The sample was sent to Catherine Griffiths (University of Wales, Lampeter, Archaeological Services) for identification and to assess their potential of radiometric and/or AMS dating (Appendix 3)

7.3 Results

The location of the trench was determined using the corners of the 'folly' as grid control points and measurements were taken to locate the southern terminal of feature 5 (Figure 15). A number of archaeological features were encountered during the excavation including a possible track way with a north-south orientation at the north-eastern end of the trench, a single post hole in the south-west corner and a pit along the northern boundary of the trench. With the exception of the post hole, all other features were only seen and recorded in section as they were not identified in plan.

The excavation only produced one small find, a thumb-nail scraper (SF 1) from within a recorded context, but a range of finds came out of the top soil from small pieces of Mesolithic flint to a metal Girl Guide tag!

The top soil (1) was removed with a mechanical digger, mattock and trowel to a depth of 0.30m across the full length of the trench.

Removing the top soil (1) revealed three subsoil layers (5), (13) and (17) in different areas of the trench. Subsoil (5) spread across the whole of the western side of the trench eastward for 1.5m at depth of 0.20m, (17) spread across the central area of the trench starting at 1.5m from the western end spreading for 9.5 m in an easterly direction with a depth of approximately 0.10m, and (13) covered an area of 5.60m at the eastern end of the trench with a depth of approximately 0.30m.

Due to the lack of obvious archaeological features beneath the topsoil, it was decided not to fully excavate the whole trench. Instead, box sections were located within each of the different subsoil deposits for further investigation. The results from the three box sections are presented with the stratigraphic sequence from latest to earliest.

7.3.1 Box section 1

Box section 1 is located in the south-western corner of the trench and contained deposits (1), (5), (6), (9), (11) and cut [10]. The box section was 3.15m in length, with a width of 1.2m and a depth of 0.80m. Along the southern edge of the section, deposit (5) was cut by [10] which contained fill (6). Cut [10] also cut into deposit (9) that is overlain by (5). The base of [10] lies directly over (11).

Cut [10] has a gradual slope along its eastern edge, with the western edge being more difficult to determine. In the box section cut [10] appears to be a bowl shaped feature, however, [10] appears to continue along the exposed section of the trench edge beyond the box section and contained deposits (6), (12) and (16) (Figures 18, 19, 20, 24 and 25). Fills (6) and (12) are stony deposits that spread 0.25m (6) and 0.80m (12) from the edge of the trench and were separated by (16). It was not clear whether (6) and (12) are natural or intrusive stony deposits, however they do tend to form part of the fill of cut [10] and may actually be a single deposit.

One find of prehistoric date (SM 1) came out of deposit (9) which suggests that cut 10 and subsequent fills are of a later date (Appendix 2).

7.3.1.1 **Post hole [8]** (Figures 21, 22 and 26)

A single post hole was identified along the northern edge of the box section. Cut [8] cuts through both contexts (5) and (9), is elongated with a width of 0.25m and a depth of 0.18m. The cut is oval in plan with straight sloping sides (55°), a flat base and contains fill (7). The top of the cut is NE of the base. This feature contained no finds.

This post hole appears to be an isolated feature within the confines of the excavation trench. The fill (7) contain a large quantity of charcoal that has been identified as *Quercus* spp (Oak) (Griffiths 2008, Appendix 3)).

7.3.2 Box Section 2

Box section 2 is located along the centre of the northern end of the trench, 6m from the eastern edge, 4m from the western edge, and extends 0.90m-1m into the centre of the trench. Within this box section are contexts (2), (3) and (11) along with cut [4].

7.3.2.1 **Pit [4]** (Figures 27 and 31)

Pit [4] was only revealed in section along the western and northern end of the box section. The cut has a gradual slope with a concave base. The pit contained two fills: (2) is the upper fill with a depth of 0.20m and (3) 0.16 m of re-deposited natural. Laying beneath [4] is (11) a natural deposit. No finds were found in this feature. To help determine whether

this is a pit or ditch the box section was extended to the west by 0.50m. This revealed the outline of a shallow oval cut [4] that was very difficult to follow in plan. It was not possible to fully excavate and it was recorded in section only.

Located approximately 0.50m to the south of this feature another possible pit began to appear, but again, there was not time left to excavate and to fully record this feature, therefore it was left.

7.3.3 Box Section 3

Box Section 3 is located in the north eastern corner extending 2m along the northern boundary and 1m along the eastern end of the trench. The time constraints meant that the box section was only recorded by photography. This box section contained two fills (14) and (15). (14) is a compacted green-grey clay with charcoal flecks and with large and small stones. This layer is very similar to context (11) but the presence of charcoal flecks suggests that this a re-deposited layer with a depth of 0.10m. Beneath (14), in the north eastern end of the box section lies (15) a gritty layer. Context (15) was not fully excavated; therefore its depth is unknown.

The two deposits (14) and (15) are very suggestive of remains of a possible road surface with (14) compromising of a compacted layer of a clay with charcoal flecks and stone inclusions overlaying a very gritty loamy layer with a large quantity (80%) of small stones (15) (Figures 32 and 33).

7.3.4 Charred plant remains

A sample of charcoal was removed from fill (7) that was made up of *Quercus* spp (oak) a small quantity was deemed suitable for AMS dating (Griffiths 2008) but as the post hole is an isolated feature it is difficult to determine its relationship with any of the other features. More significantly, the lack of finds from any of the features, suggest that obtaining an AMS date, at this time, would not increase our understanding of the archaeology (Appendix 3).

7.4 Discussion and conclusion

The excavation did not quite reveal what we had expected to find. Once the data from the GPS and EDM was processed and compared with the geophysical results it was noticed that the anomalies intended for investigation had been missed by the trenching. However, the trench hit other anomalies which include a post hole, pit (and possibly a second pit) and the remains of a track way. Two possible stone deposits may also represent some sort of structure but currently it is not possible to identify.

One of the most striking aspects of this excavation was the lack of finds in any of the archaeological features. The only find was a single piece of flint found in context (9) within box section 1, of possible prehistoric date (Bradley *pers comm.*). The only other finds came from the topsoil and consisted of a variety of material from the Mesolithic to the present day. However, most of these finds were located in the western and central aspects of the trench with no finds located in the eastern third. The finding of prehistoric pottery and flint artefacts in the top soil suggests that there has been some prehistoric activity in The Warren but subsequent ploughing or other activities associated with the pit, post-hole and road have mixed finds from different periods into the top soil. Therefore, it was not possible to determine the date of the features.

The excavation was unable to determine the nature of intended features. Nevertheless, the results do indicate that the Warren has had a long history of land use and with a systematic programme of archaeological investigation our understanding can only be increased.

The excavation was very successful at attracting local volunteers and visitors, both adults and children, during the excavation and to whom we were able to highlight the archaeological potential of The Warren. Furthermore, we had additional help from Hartland Primary school, The Small School, Hartland Cub Scouts and young adults from the Ivy Project.

7.5 Recommendations

This report represents an initial stage of an archaeological investigation and presents the analysis of the results and provides a record that can be used to target further assessment and analysis.

At the conclusion of this evaluation excavation the following tasks have been achieved:

- This report forms part of the archive outlining the results of the excavation and geophysical surveys undertaken as part of the XArch Project;
- All context sheets, finds and sample recording sheets have been completed and archived;
- All photographs have been indexed and catalogued;
- All correspondence has been filed and stored within the archive boxes;
- All finds have been cleaned, catalogued and stored in acid free box;
- Charred plant remains has been examined, identified and reported and included in the archive;

The geophysical results clearly demonstrate that there is a wealth of archaeology within the Warren that needs further archaeological investigation through an extended programme of excavation targeted at specific anomalies.

7.6 Project archive

The project's documentary, photographic and drawn archive is housed at Hartland Abbey. The contents of this archive are as listed below:

1. A project file containing site records and notes, project correspondence and administration;
2. Finished plans and sections are stored as Electronic drawings stored in the directory.
3. Colour photographs archived under the following index numbers.
4. Digital photographs stored in the directory.
5. This report held in digital form as: DOCUMENT3.

Artefacts and environmental material retrieved during the project are stored at Hartland Abbey.

8 Bibliography

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Heritage Environment Record, 2007: *Hartland Stone*, RefNo:7316, SS22SW/15.

Heritage Environment Record, 2007: *Warren*, RefNo: 43119, SS22NW/24.

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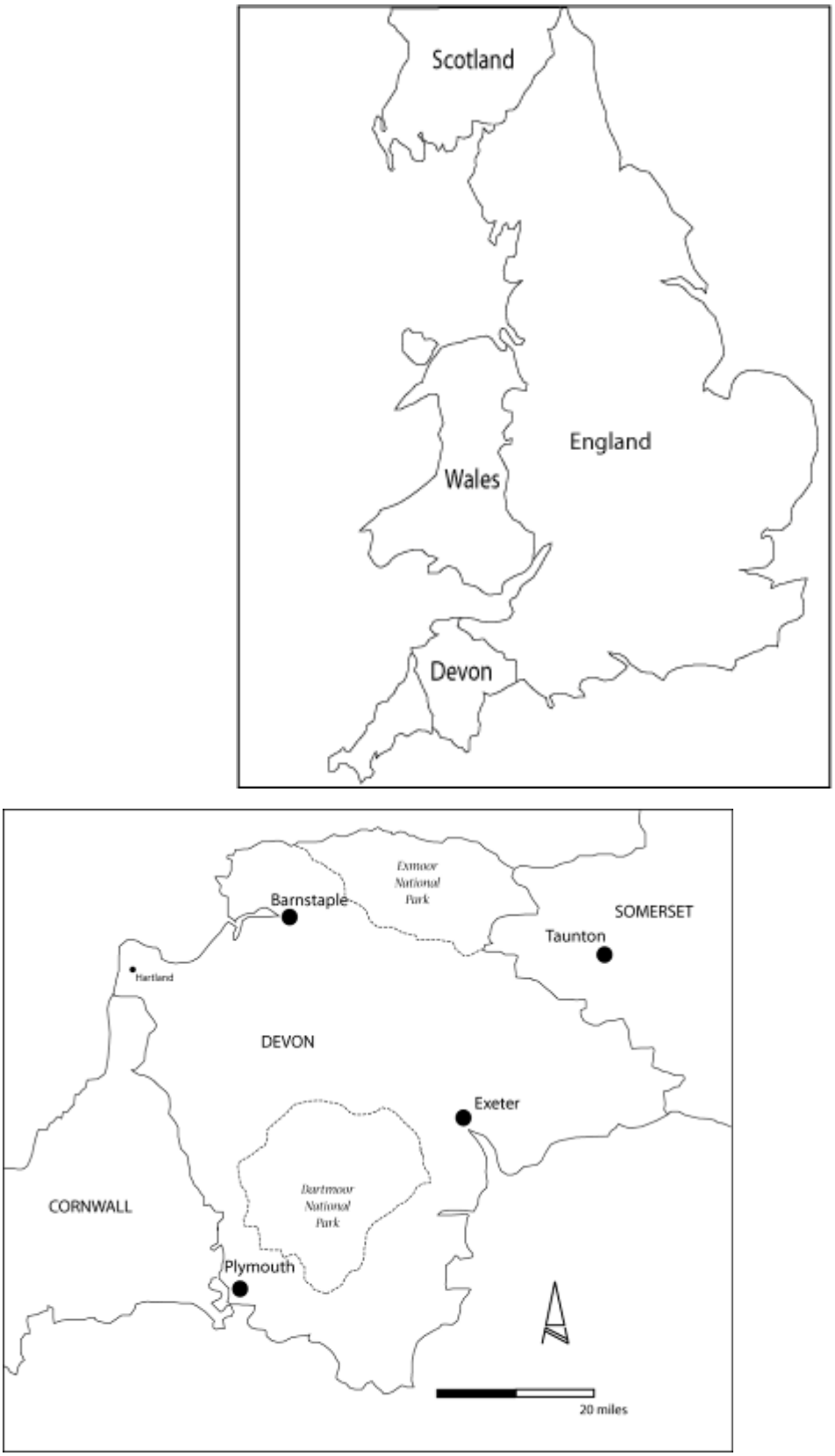


Figure 1. *Location maps*

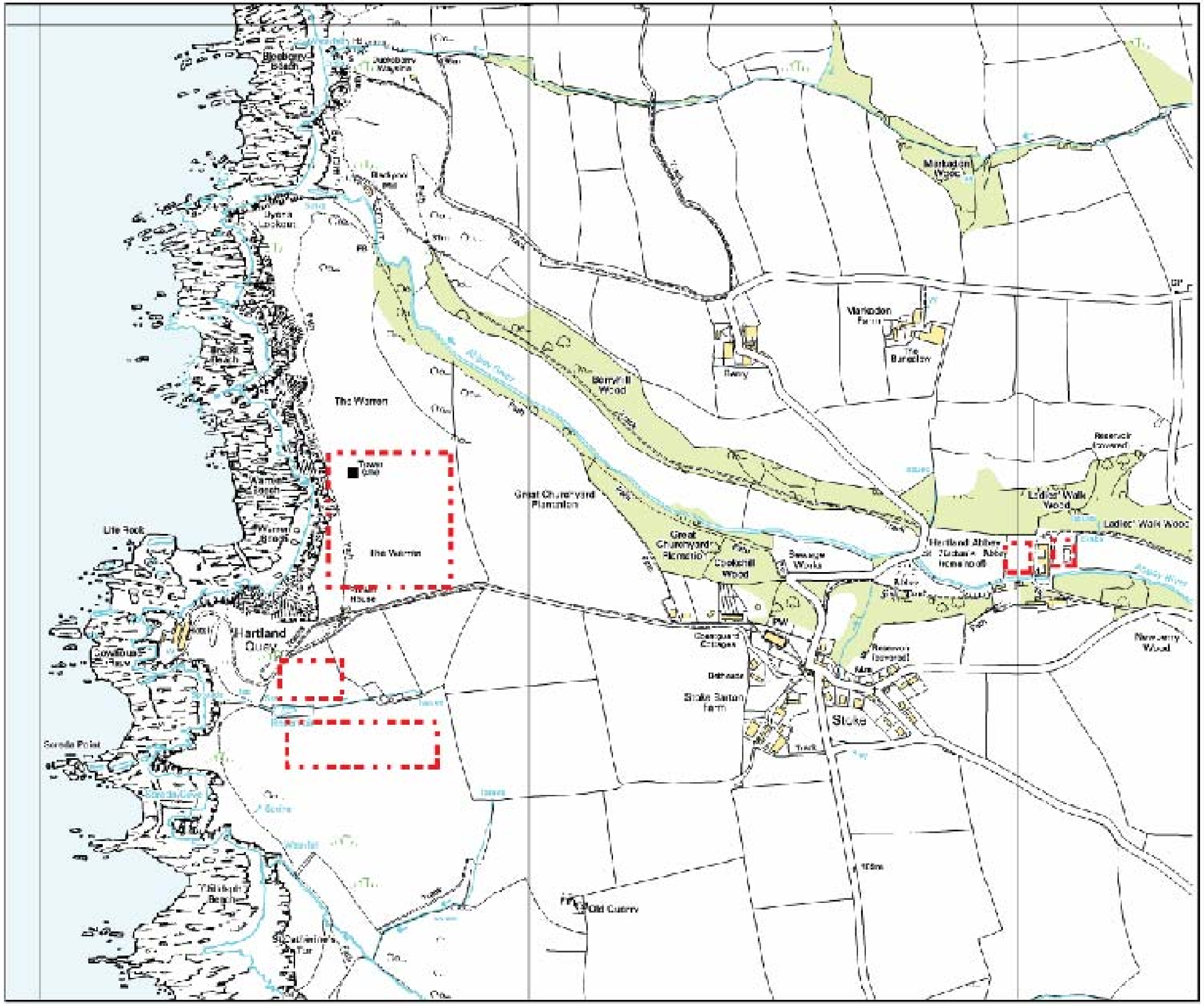


Figure 2. *Location of geophysical surveys undertaken* *Scale1:10000 ©Crown Copyright/database right 2009. An Ordnance Survey/EDINA supplied service*

Figure 3. *Tithe Map, 1840*

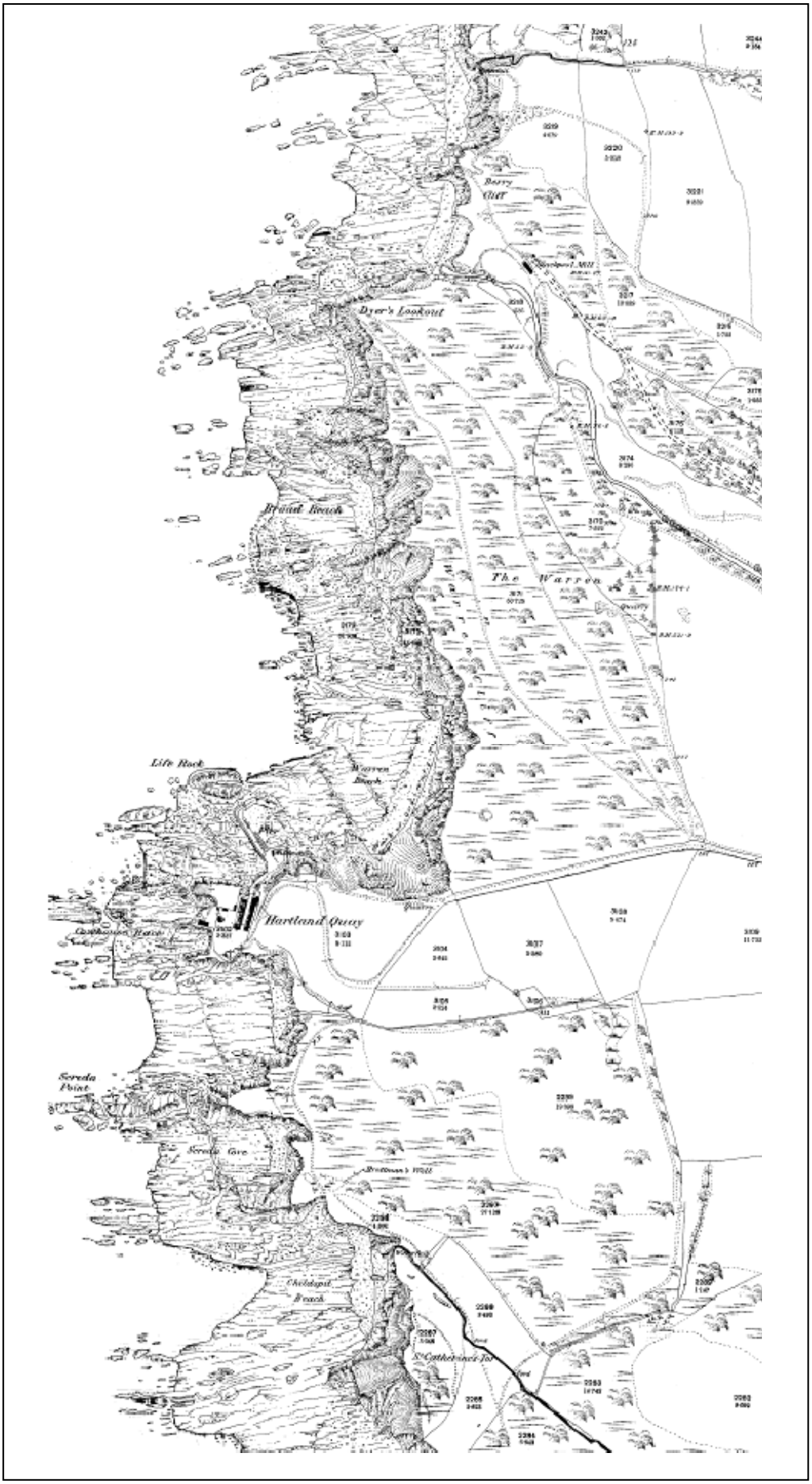


Figure 4. *First edition of the Ordnance,1:2500 Survey of the Warren* *Country Series 1st Edition 1886 ©Crown Copyright and Landmark Information Group Limited (2009). All rights reserved (1886) Scale 1:2500*

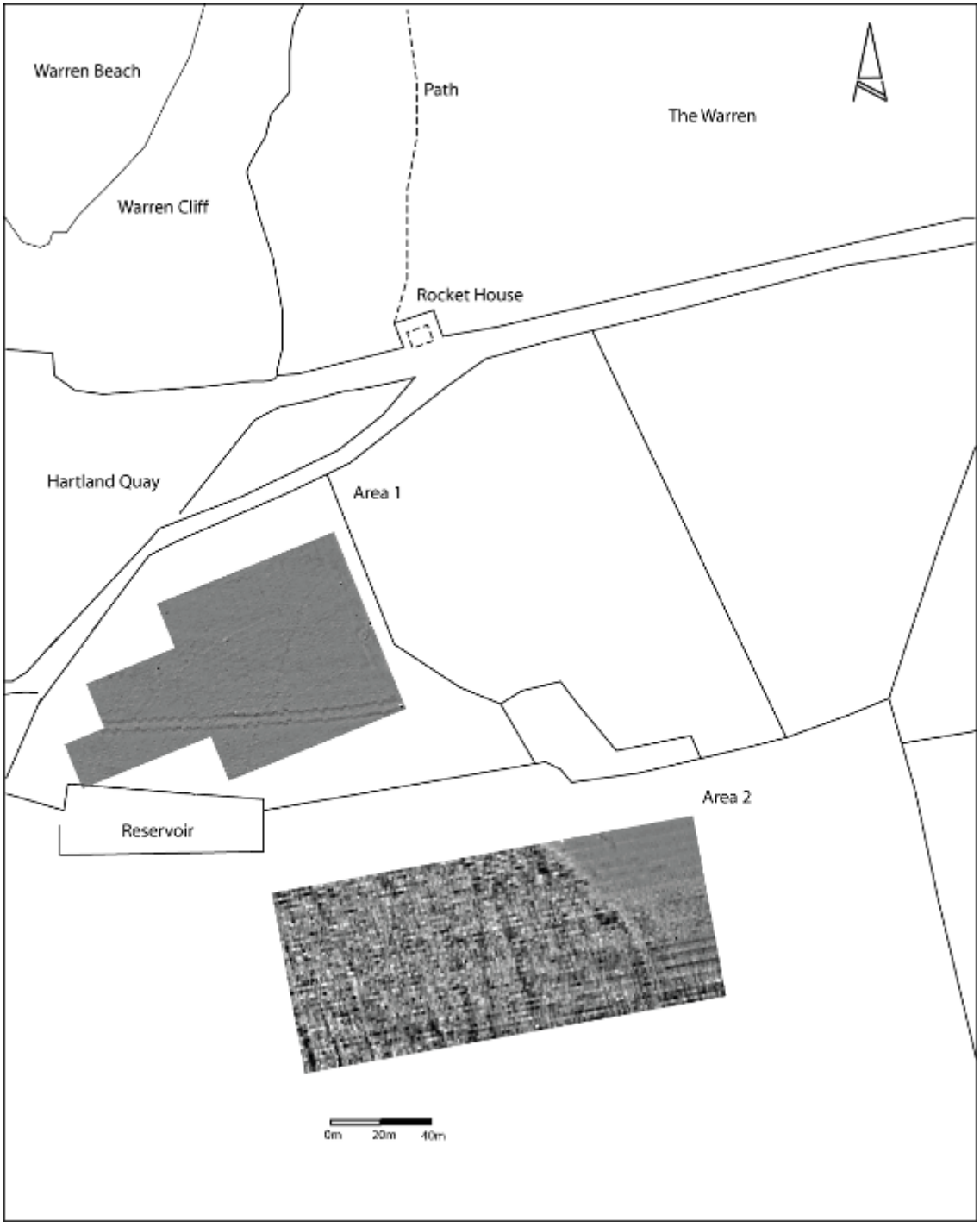


Figure 5: *Results of Geophysical survey at High Warren Hill (Area 1) and Sheeplace (Area 2): Raw Data*

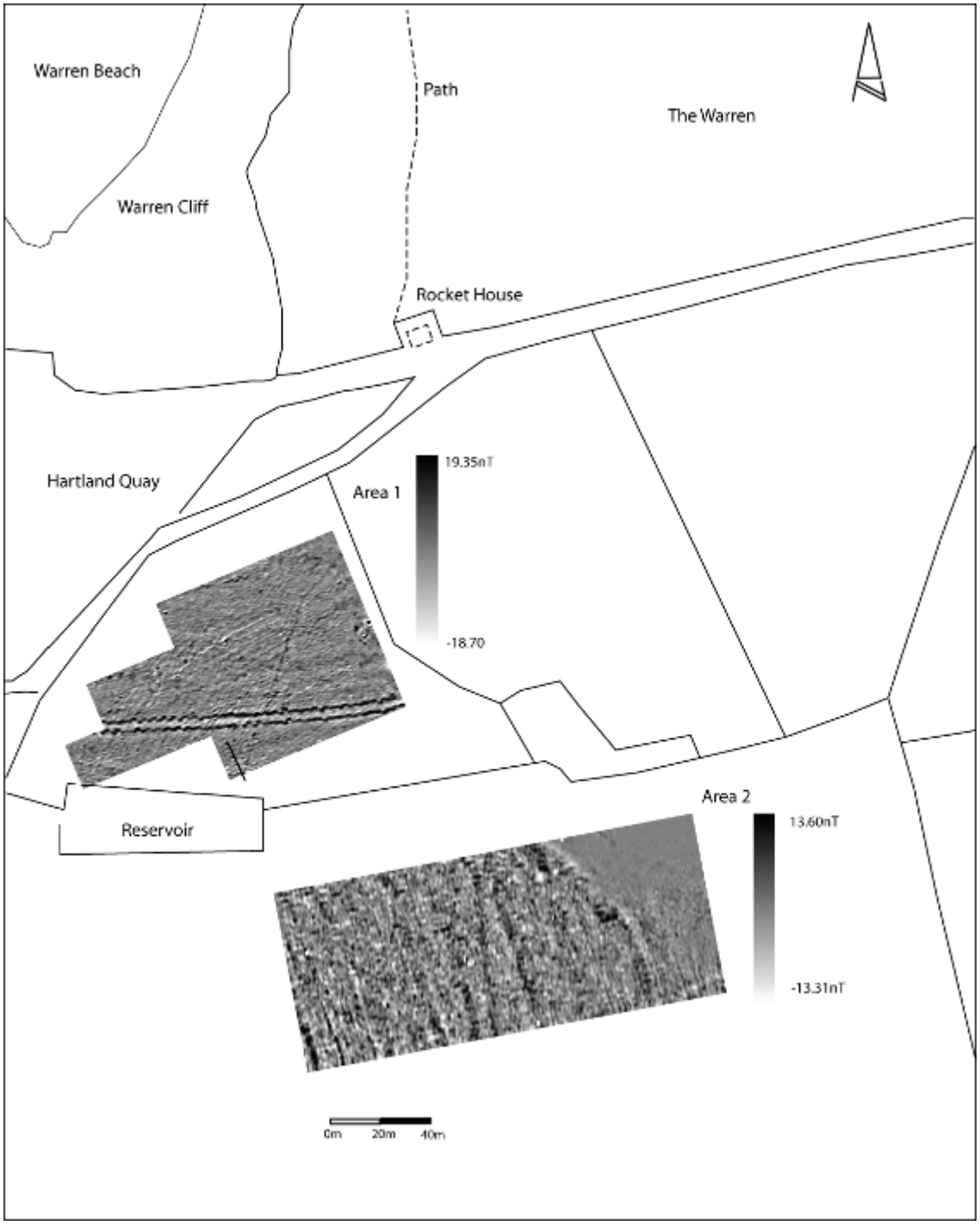


***Figure 6**: Results of Geophysical survey at High Warren Hill (Area 1) and Sheeplace (Area 2): Processed Data*

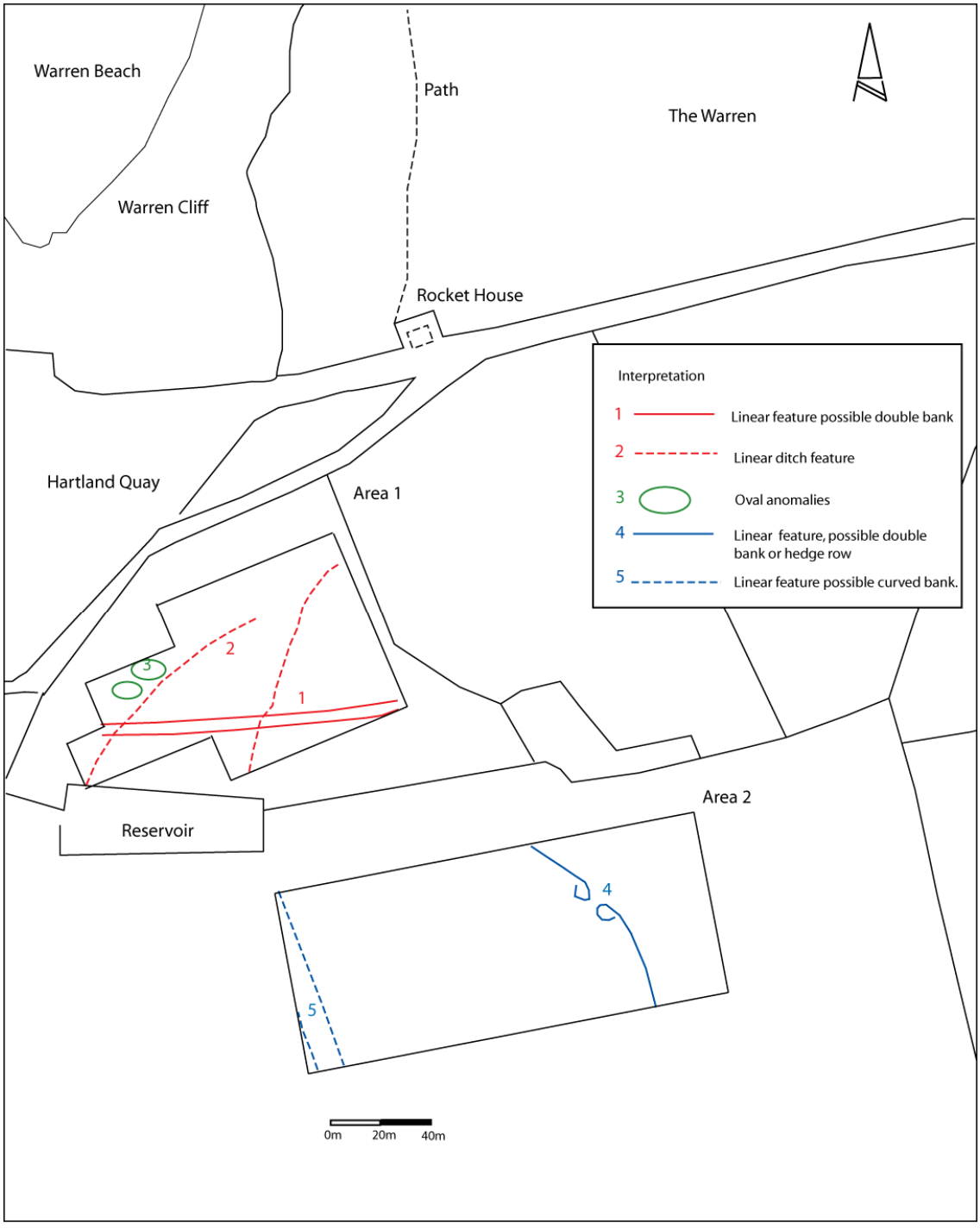


Figure 7: *Results of Geophysical survey at High Warren Hill (Area 1) and Sheeplace (Area 2): Interpretation*

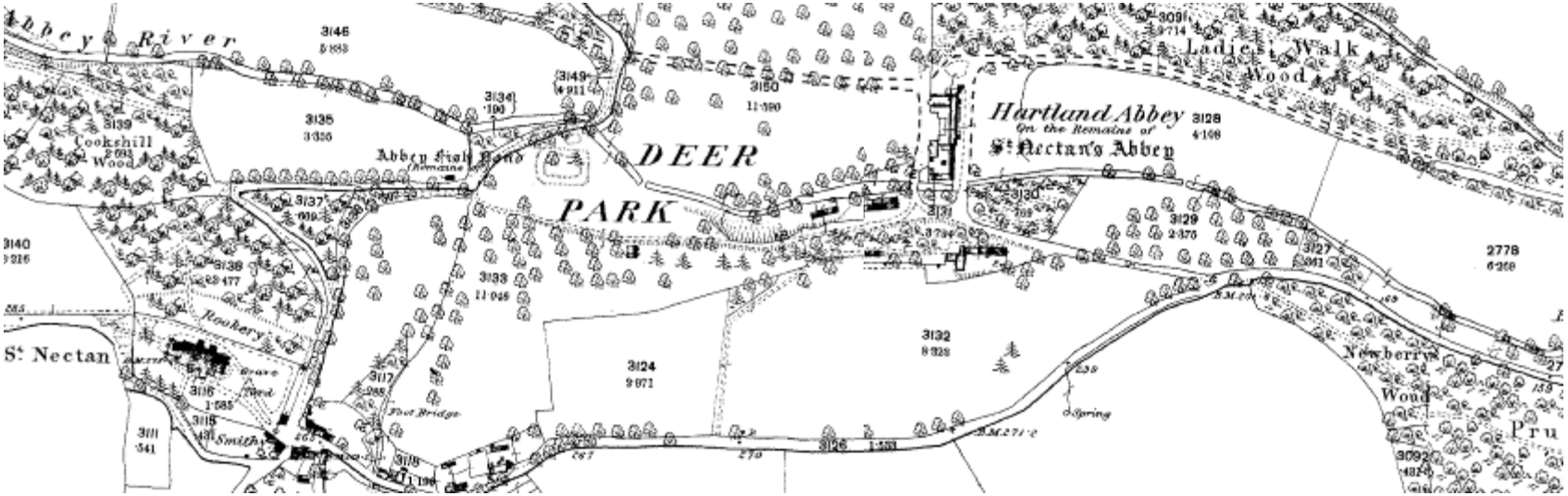


Figure 8.. *OS 1st edition map of Hartland Abbey, 1886*

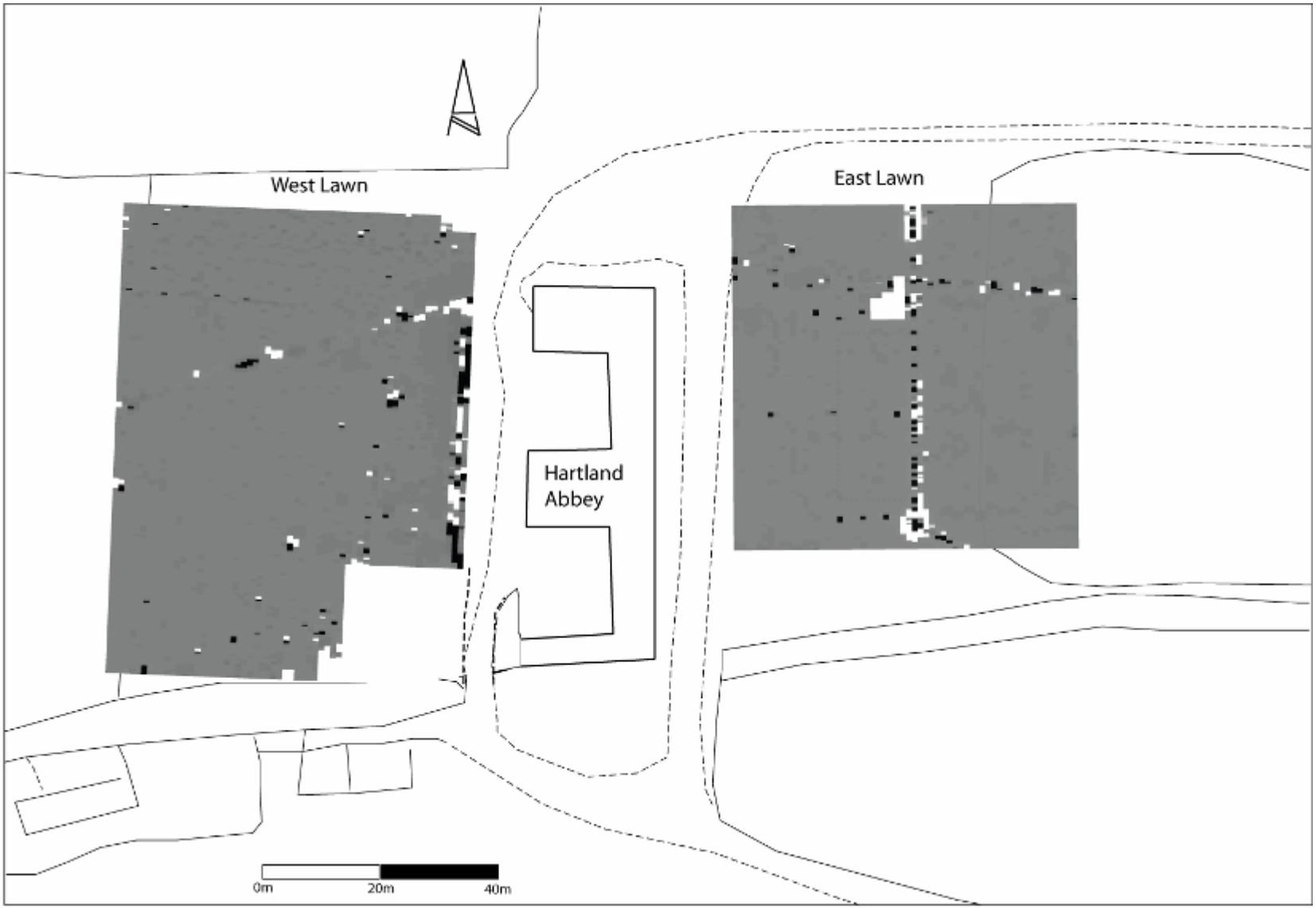


Figure 9: *Results of Geophysical survey at Hartland Abbey: Raw data*

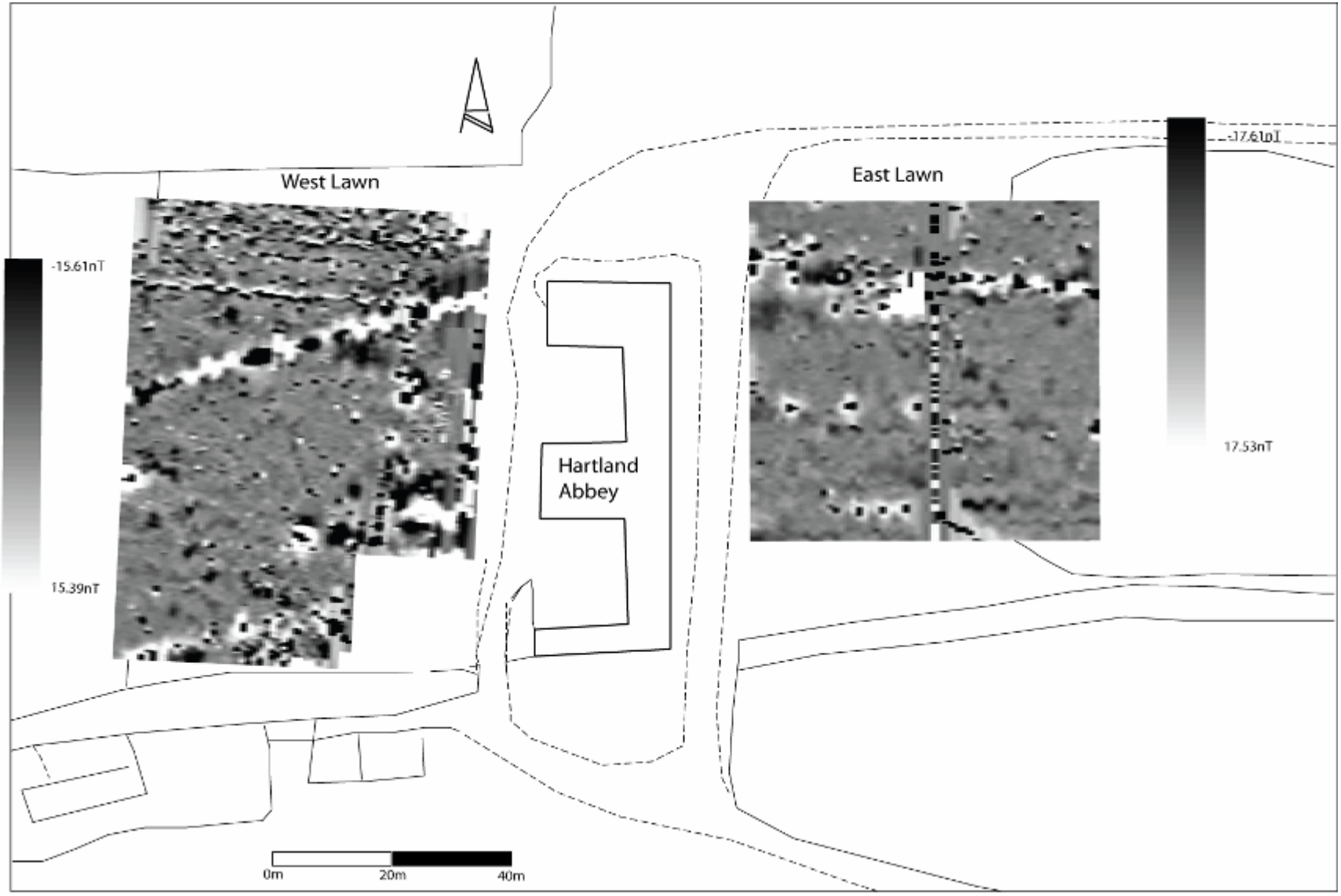


Figure 10: *Results of Geophysical survey at Hartland Abbey: processed data*

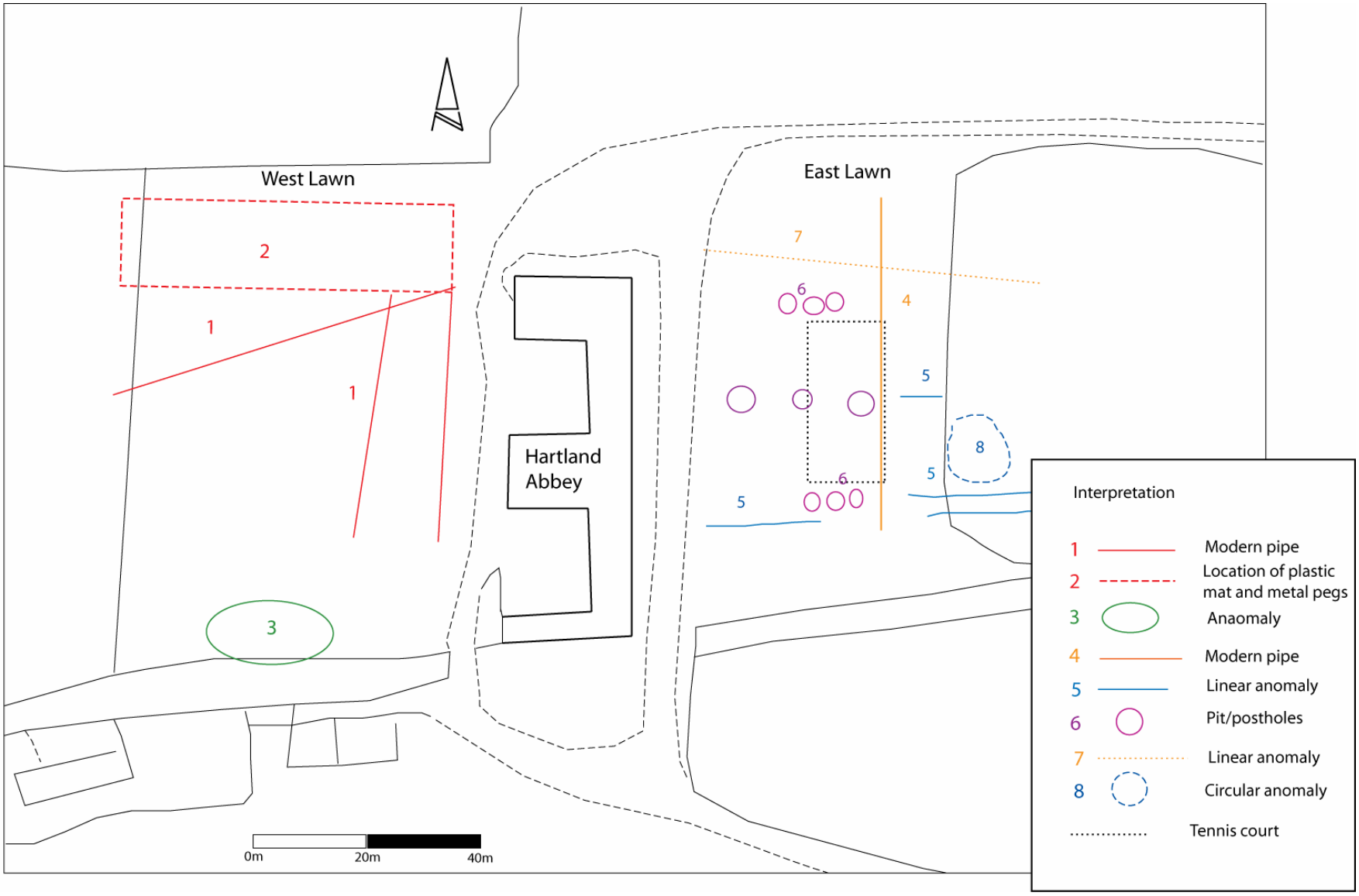


Figure 11:. *Results of Geophysical survey at Hartland Abbey: Interpretation*

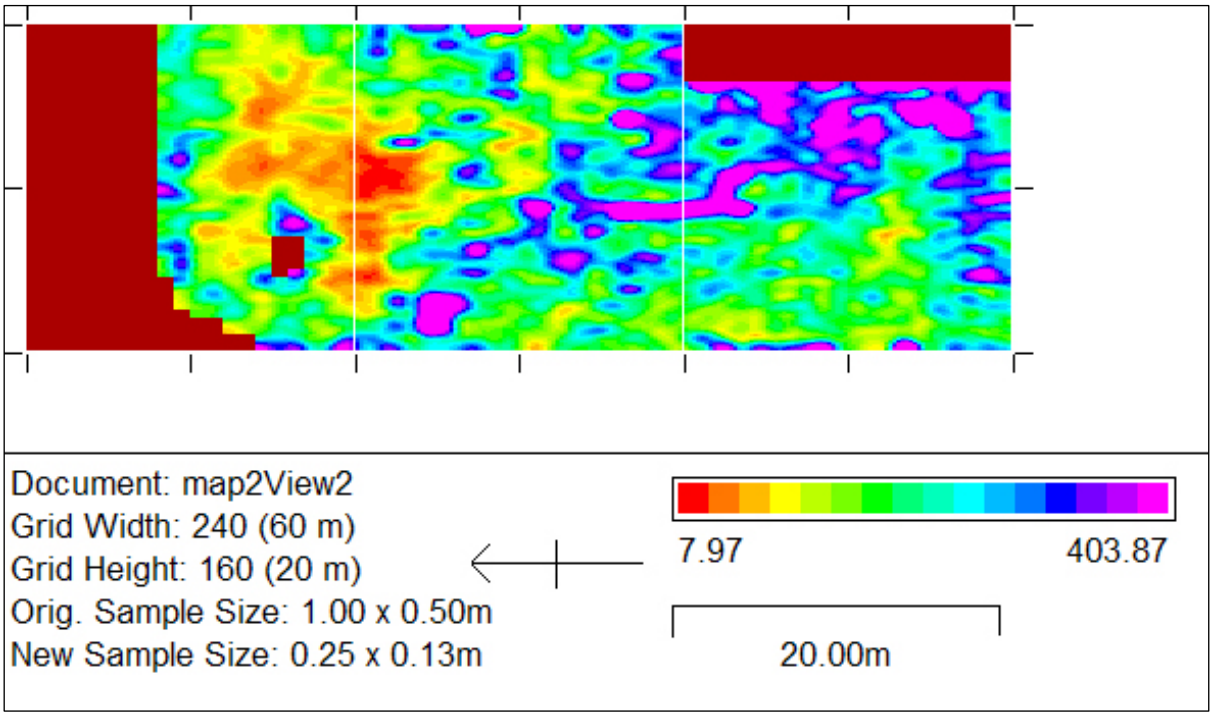


Figure 12: *Initial test area of resistivity for the East Lawn*

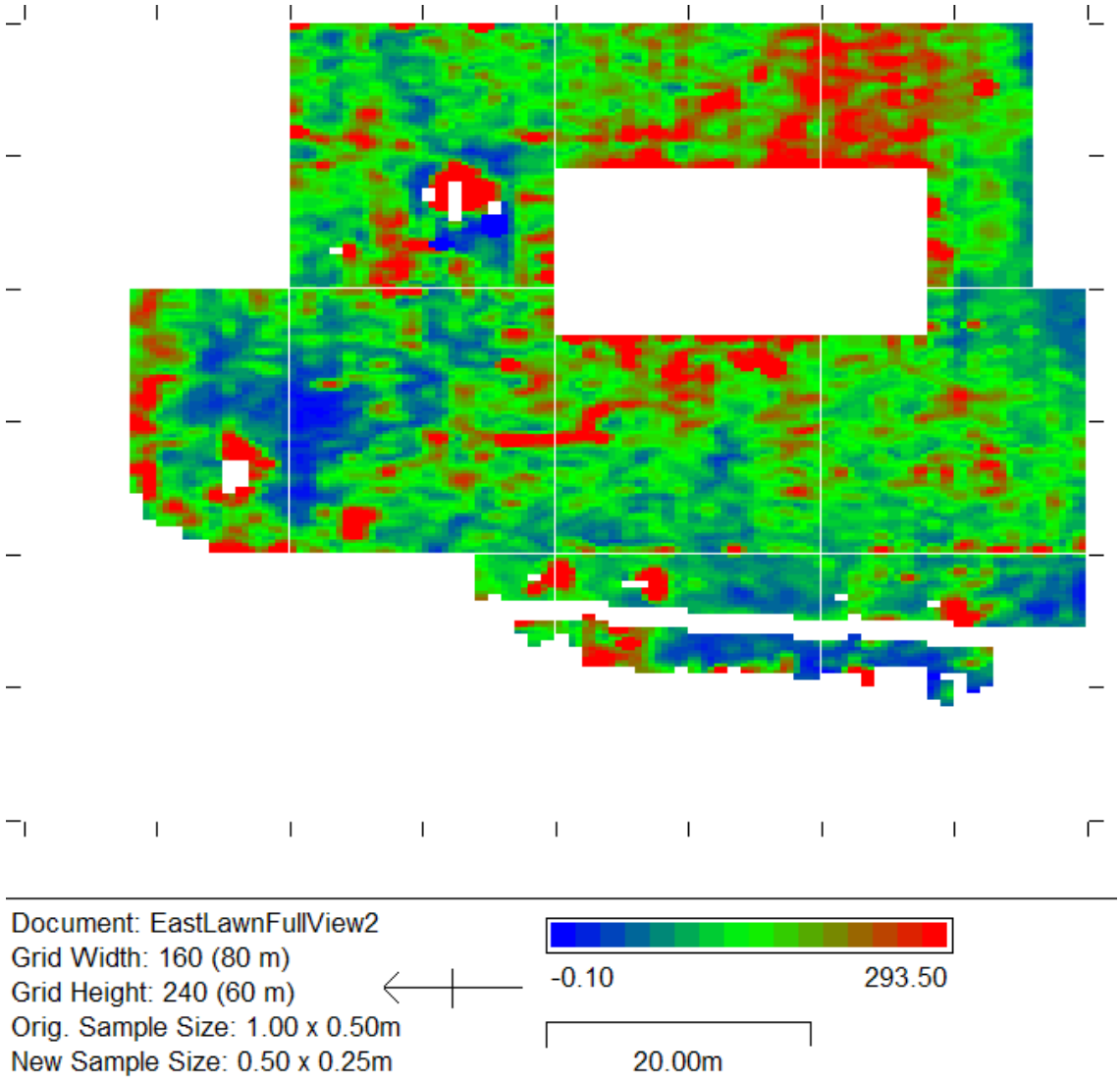
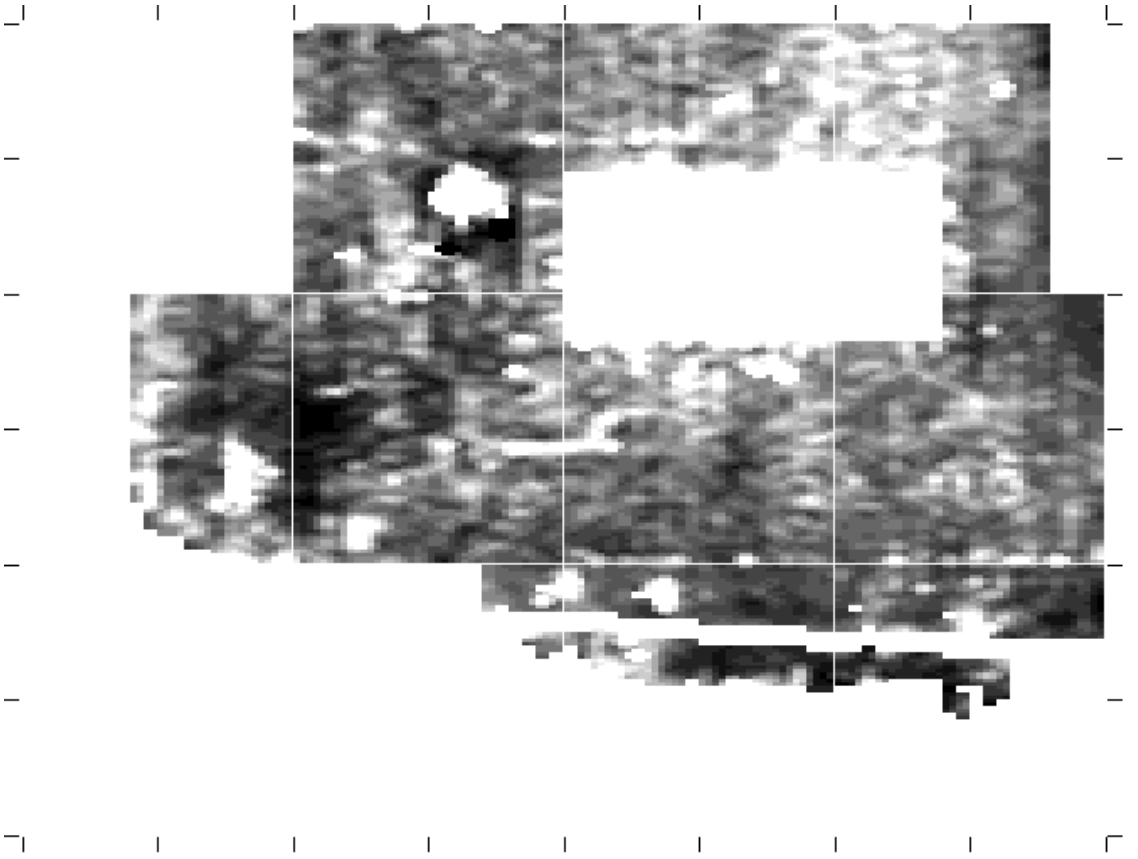


Figure 13: *Resistivity results on the East lawn*



Document: EastLawnFullView2
Grid Width: 160 (80 m)
Grid Height: 240 (60 m)
Orig. Sample Size: 1.00 x 0.50m

Figure 14: *Resistivity of the East lawn (2)*

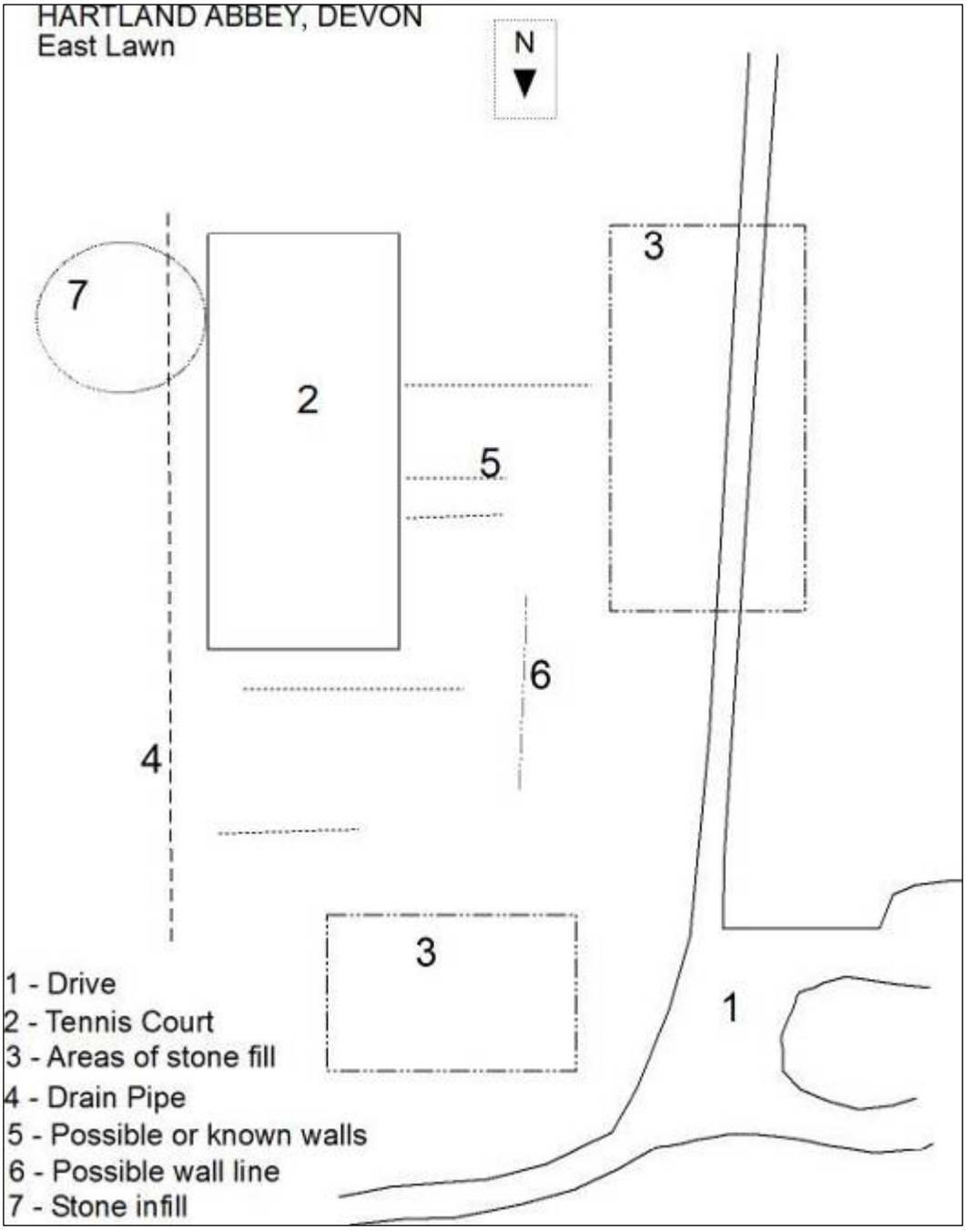


Figure 15: *Interpretation*

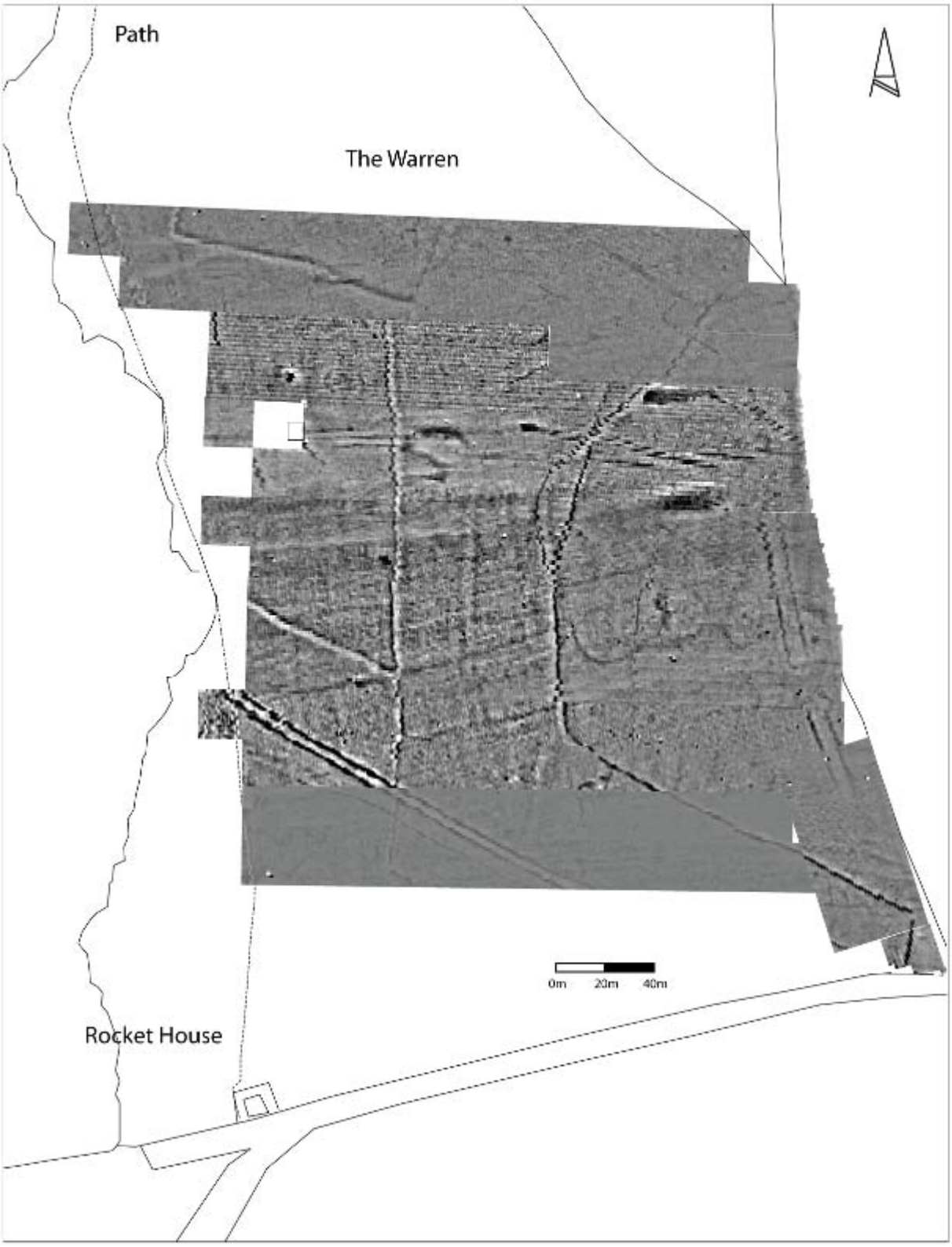


Figure 16: *Results of Geophysical survey at The Warren: Raw Data*

Figure 17: *Results of Geophysical survey at The Warren: Processed Data*

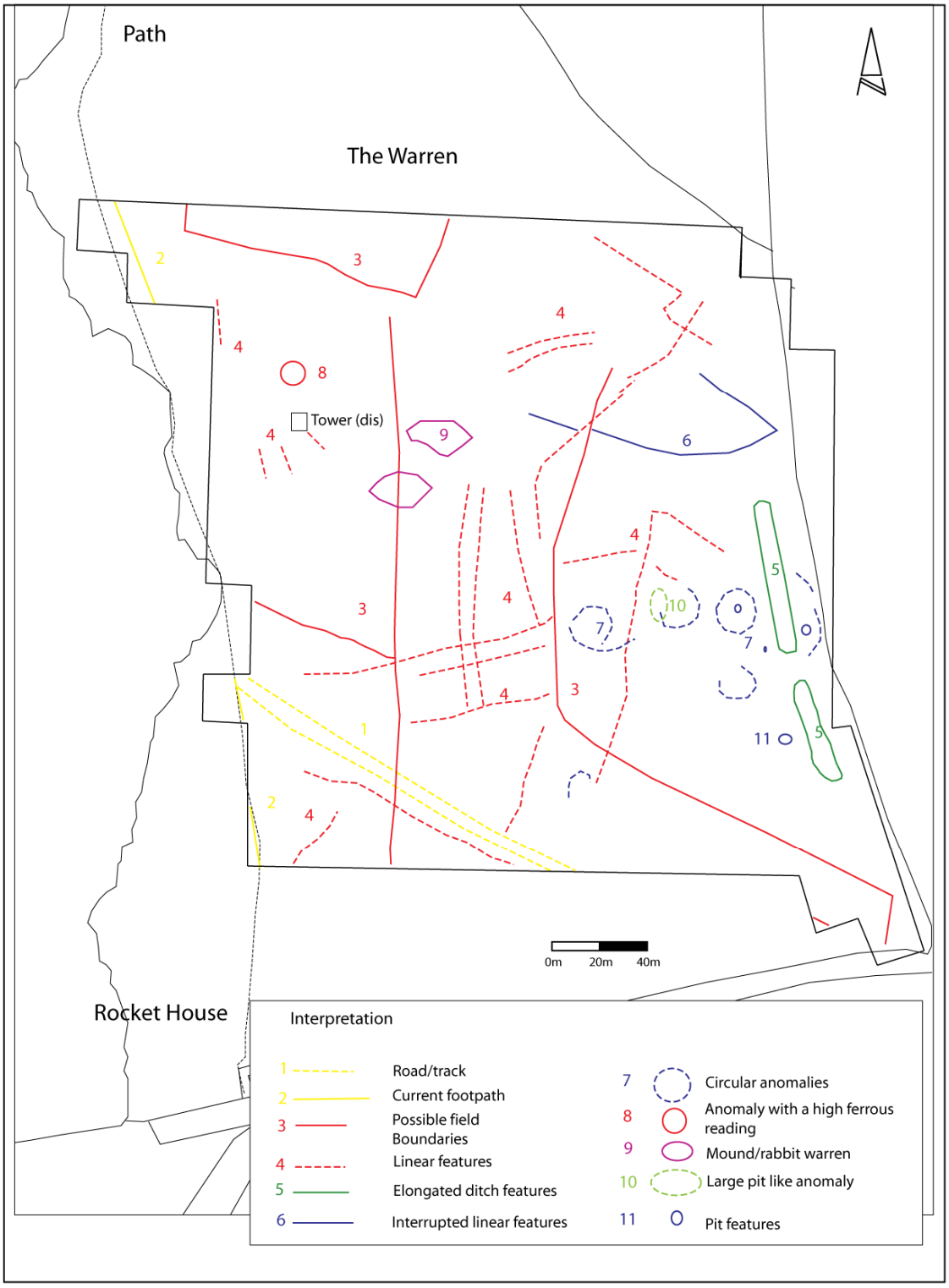


Figure 18: *Results of Geophysical survey at The Warren: Interpretation*

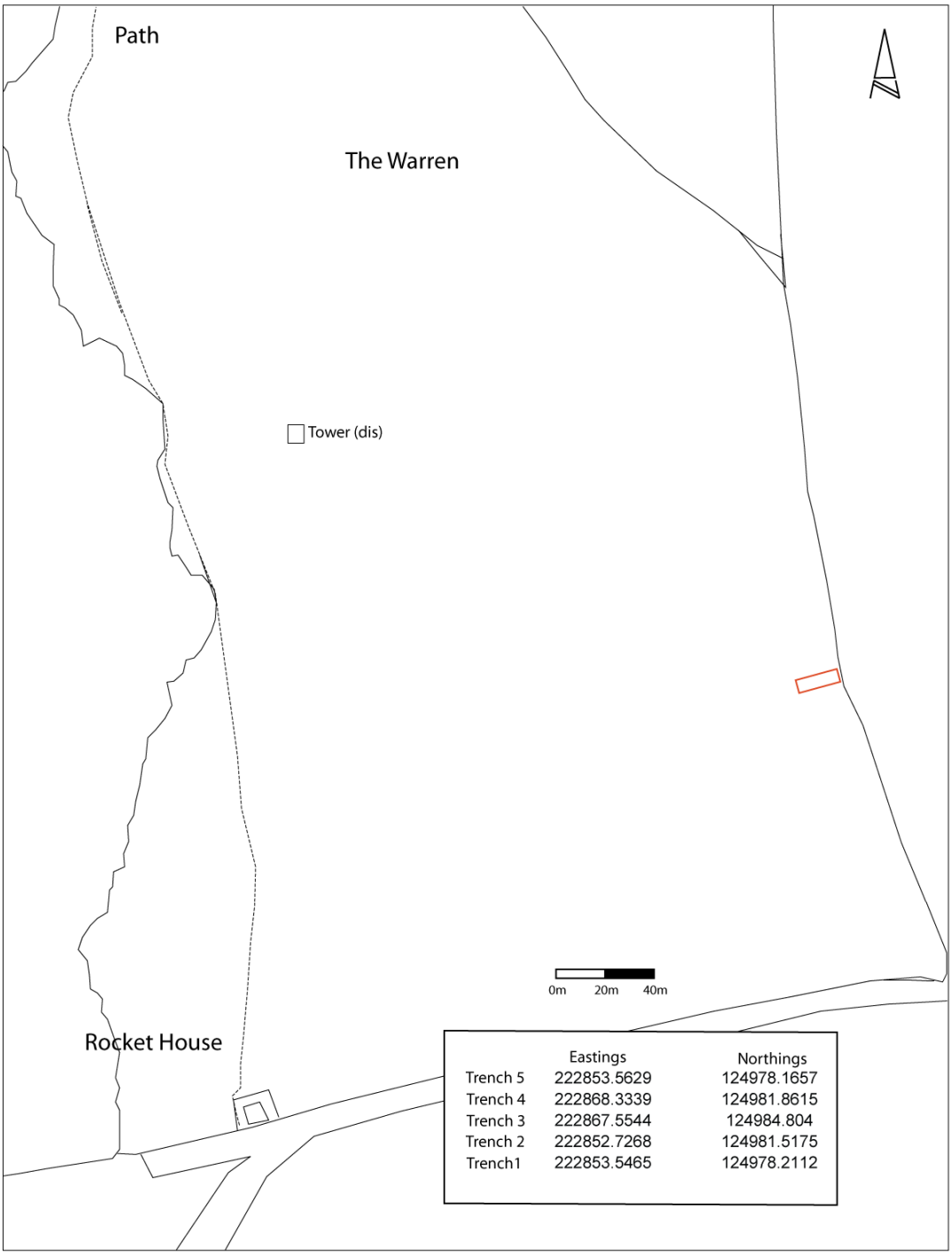
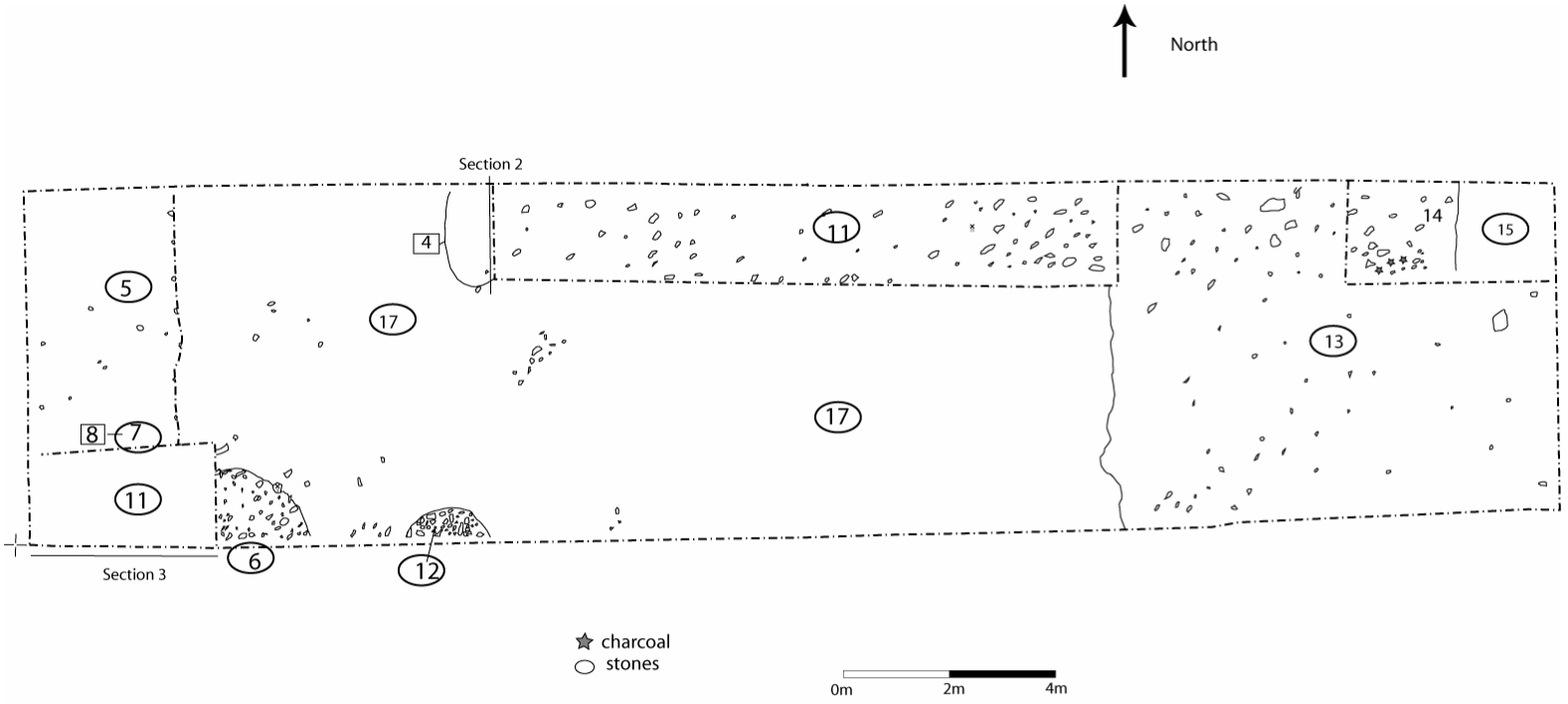


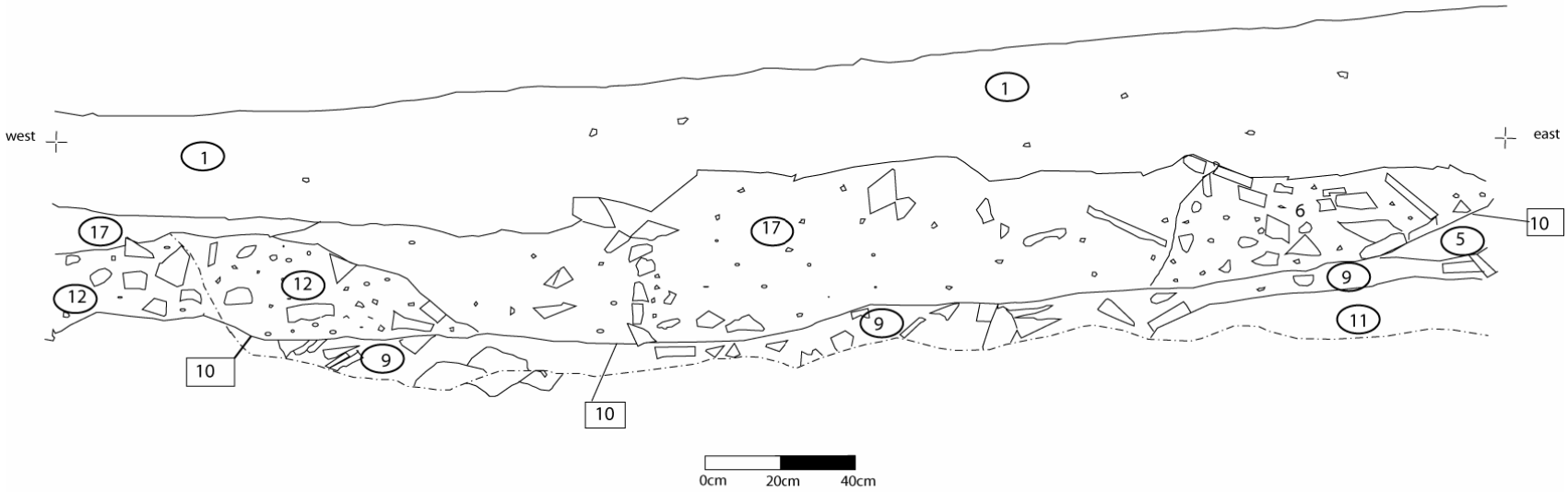
Figure 19: *Location of excavation trench in The Warren*

Figure 20 *Location of Box section in excavation trench*



Pre-excavation plan (showing box sections)

Figure 21: *Trench Plan*



Section northface of Box Section 1

Figure22: *Section Number 7*

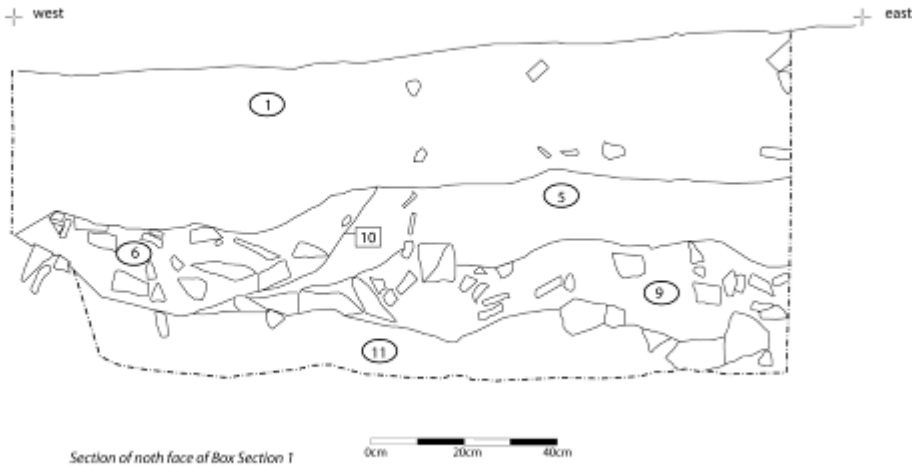


Figure 23: *Section Number 3*

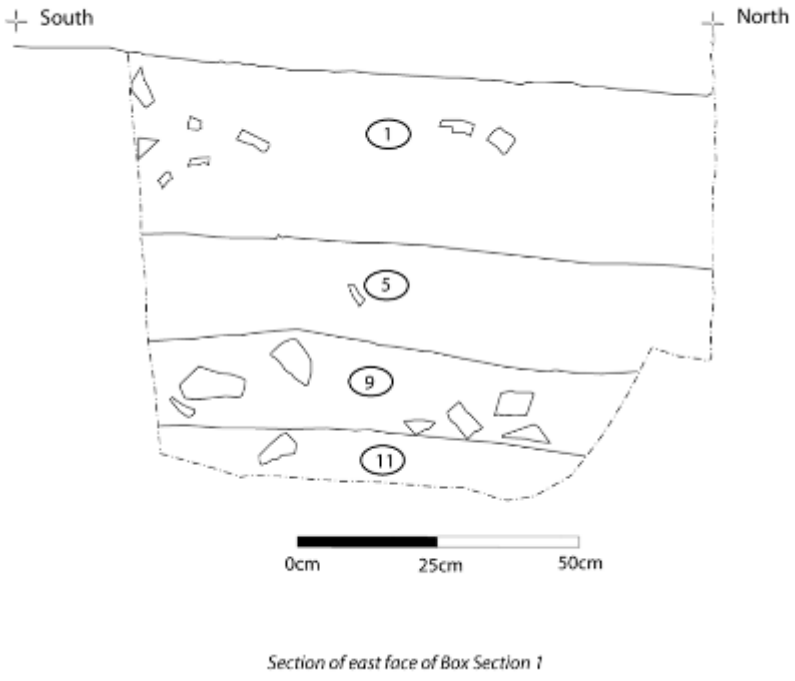


Figure 24 *Section Number 4*

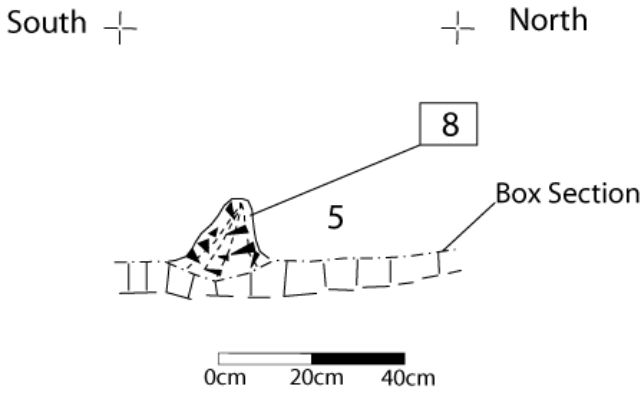


Figure 25:. *Plan of post hole*

Plan of posthole

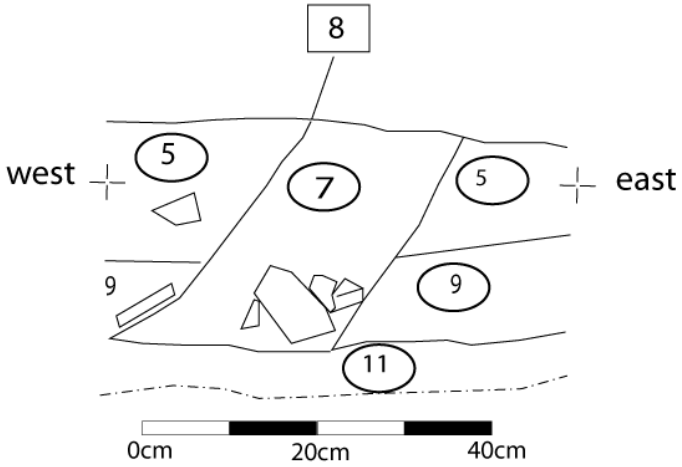


Figure 26: *Section Number 5*

Section through posthole

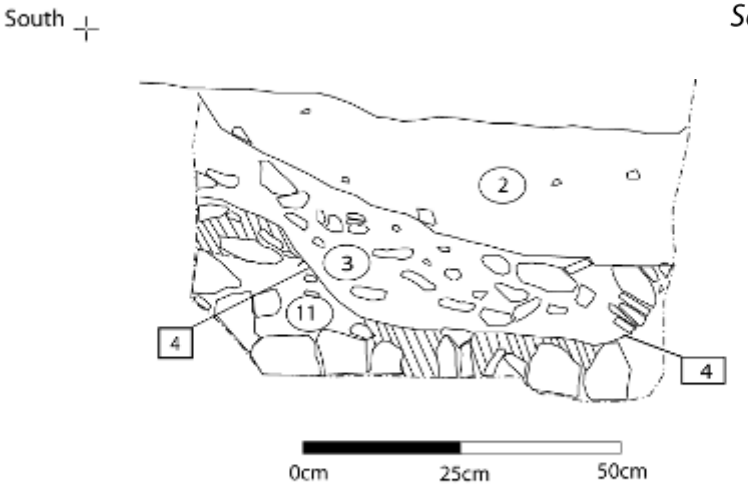


Figure 27: *Section number 2*

Section through pit/ditch (west facing)

Figure 28: *Photo 37, Box section 1 (south facing)*

Figure *29:* *Photo 40, Box section 1 (west facing)*

Figure 30:. *Photo 43, Box section 1, post hole (north facing)*

Figure 31:. *Photo 34, Box section 2 – pit in section (ewest facing)*

Figure 32:. *Photo 51, Box section 3 (south facing) with context 14 and 15*

Figure 33. *Photo 52,* ***Box*** *section 3 (North facings)*

Site Name	THE WARREN	Site Code	WAR 08				
Context no.	**Site sub-division**	**Type (cut, Deposit, Build)**	**Description**	**Plan no.**	**Section no.**	**Date**	**Init.**
1	Trench 1	Deposit	Top/Plough Soil		3,4,5	07/05/2008	SW
2	Trench 1	Fill	Orangey soft sill of 4		2	09/05/ 2008	SW
3	Trench 1	Fill	Re-deposited natural fill of number 4		2	09/05/ 2008	SW
4	Trench 1	Cut	Cut of Pit/Ditch		2	09/05/ 2008	SW
5	Trench 1	Deposit	Very Orange Deposit at Top of Trench		3,4,5	09/05/ 2008	SW
6	Trench 1	Fill	Stony Fill of number 10		3	09/05/ 2008	SW
7	Trench 1	Fill	Charcoally fill of number 8		5	09/05/ 2008	SW
8	Trench 1	Cut	Cut of Post-Hole		5	09/05/ 2008	SW
9	Trench 1	Deposit	Very Stony Deposit below 5		3,4,5	09/05/ 2008	SW
10	Trench 1	Cut	Cut of Stone Plinth		3	09/05/ 2008	SW
11	Trench 1	Deposit	Natural- Blue/Green clay + Degraded stone		3,4,5	09/05/ 2008	SW
12	Trench 1	Fill	Stony patch same as number 6	1		10/05/ 2008	SW
13	Trench 1	Deposit	Stony layer at E. End of Trench	1		10/05/ 2008	SW
14	Trench 1	Deposit	Re-deposited green clay over, number 15	1		10/05/ 2008	SW
15	Trench 1	Deposit	Grey, Brown gritty deposit below clay	1		10/05/ 2008	SW
16	Trench 1	Deposit	Orange, Brown between 6+7		7	10/05/ 2008	SW
17	Trench 1	Deposit	Orangey, Brown Deposit below top soil		7	10/05/ 2008	SW

Table 1. *Context Index*

Site Name	THE WARREN	Site Code	WAR 08					
Small Find no.	**Context no.**	**Type**	**Description**	**Level no.**	**Plan/Section no.**	**Weight (gms)**	**Date**	**Init.**
1	9	Flint	Worked Flint, Yellow Colour			2.7	10/05/ 2008	RM

Table 2. *Small Finds Index*

Site Name	THE WARREN	Site Code	WAR 08			
Photo no.	**Plan/Section**	**Site sub-Division**	**Description**	**Context Nos**	**Date**	**Init.**
34	Section	T1	Section of Ditch	2,3,4	09/05/2008	SW
35	Section	T1	Section of Ditch	2,3,4	09/05/2008	SW
36	Section	T1	Section of Ditch	2,3,4	09/05/2008	SW
37	Section	T1	Section of Box Section (South Facing)	5,6	09/05/2008	SW
38	Section	T1	Section of Box Section (South Facing)	5,6	09/05/2008	SW
39	Section	T1	Section of Box Section (South Facing)	5,6	09/05/2008	SW
40	Section	T1	Section of Box Section (West Facing)	5+6	09/05/2008	SW
41	Section	T1	Section of Box Section (West Facing)	5+6	09/05/2008	SW
42	Section	T1	Section of Box Section (West Facing)	5+6	09/05/2008	SW
43	Section	T1	Section of Post-Hole	7,8	09/05/2008	SW
44	Section	T1	Section of Post-Hole	7,8	09/05/2008	SW
45	Section	T1	Section of Post-Hole	7,8	09/05/2008	SW
46	Section	T1	Box Section (North Facing)	6+12	10/05/2008	PC
47	Section	T1	Box Section (North Facing)	6+12	10/05/2008	PC
48	Section	T1	Box Section (North Facing)	6+12	10/05/2008	PC
49	Section	T1	Box Section (South Facing)	13	10/05/2008	PC
50	Section	T1	Box Section (South Facing)	13	10/05/2008	PC
51	Section	T1	Plan Box Section (South Facing)	14+15	10/05/2008	PC
52	Section	T1	Plan Box Section (North Facing)	14+15	10/05/2008	PC
53	Section	T1	Box plan ex Section (North Facing)		10/05/2008	PC
54	Section	T1	Box plan ex Section (North Facing)		10/05/2008	PC
55	Plan	T1	Trench 1 Post Ex	5, 6, 7,11, 12, 13. 14, 15, 17	10/05/2008	SW
56	Plan	T1	Trench 1 Post Ex	5, 6, 7,11, 12, 13. 14, 15, 17	10/05/2008	SW
57	Plan	T1	Trench 1 Post Ex	5, 6, 7,11, 12, 13. 14, 15, 17	10/05/2008	SW

Table 3*. Photographic Index*

Site Name	THE WARREN	Site code	WAR 08				
Sample No.	Context no.	Quantity (Bags/Litres)	Description	Plan No.	Section No.	Date	Init.
1	7	Approx-2.5	Dark Soil With Charcoal Flecks + Some Stone	6	5	10/05/08	BM

Table 4. *Sample Index*

Site Name	THE WARREN	Site code	WAR 08	
Trench	Type	Description	Weight (gms)	Date
1	Metal	Modern metal name plate	8.3	May 2008
1	Glass	2 pieces of glass	8.7	May 2008
1	Pottery	3 sherds of prehistoric pottery, Bronze Age?	7	May 2008
1	Metal	Small, round piece of eroded Metal	2.4	May 2008
1	Flint	12 pieces of grey/black, worked Flint	19.1	May 2008
1	Pebbles	10 pebbles, grey	295.2	May 2008
1	Pottery	14 sherds of North Devon Gravel free ware (Jug?) 16th-17th Century)	80.5	May 2008
1	Potteyr	4 sherds of coarse ware (cooking pots?) 12th –Late 15th Century	23.4	May 2008
1	Pottery	North Devon ware – Medieval	1.1	May 2008
1	clay	2 pieces of burnt clay	13.1	May 2008

Table5. *Unstratified finds*

Site Name	THE WARREN	Site Code	WAR 08			
Drawing No.	Plan/Section	Site Sub-Division	Description	Context Nos	Date	Init.
1	Plan	Trench 1	Pre ex-Plan	2,3,4	09/05/2008	SW
2	Section	Trench 1	Section Through Ditch/Pit	5,6	09/05/2008	SW
3	Section	Trench 1	Box Section North Facing	5,6	09/05/2008	SW
4	Section	Trench 1	Box Section East Facing	7,8	09/05/2008	SW
5	Section	Trench 1	Section Through P-Hole	8	09/05/2008	SW
6	Plan	Trench 1	Plan of Post Hole 8	5	10/05/2008	SW
7	Section	Trench 1	Box Section North Facing (extension of 3)	6, 12	10/05/2008	SW

Table 6. *Drawing Index*

Point Id 26/06/08	Easting	Northing	Ellip. Hgt.
1	222883.0077	124951.0614	140.2762
2	222863.3921	124950.9219	141.4268
3	222843.301	124951.1593	142.7967
4	222843.2211	124951.0323	142.544
5	222823.2622	124951.6154	143.3713
6	222823.2484	124951.5288	143.4701
7	222803.1391	124952.06	144.2094
8	222782.9239	124952.2543	144.9673
9	222762.9475	124952.3053	145.7864
10	222743.0522	124952.7933	146.2701
11	222722.9116	124952.8713	146.3927
12	222702.9594	124953.3338	146.5237
13	222682.8386	124954.0111	146.45
14	222662.867	124954.4293	146.139
15	222642.7695	124954.8546	145.7375
16	222622.741	124955.5191	145.2656
17	222622.0055	124935.5647	145.3799
18	222642.1751	124934.8972	145.8562
19	222662.2602	124934.4212	146.237
20	222682.6558	124933.9896	146.3508
21	222702.4769	124933.4891	1
22	222722.7251	124933.2778	1
23	222742.7385	124932.9972	145.3628
24	222762.8162	124932.4501	145.1838
25	222782.8525	124932.3722	144.3606
26	222802.8578	124932.2509	144.2825
27	222822.7952	124932.1126	143.5604
28	222842.9612	124931.4833	142.5153
29	222863.0159	124931.5266	141.7235
30	222883.1909	124931.3856	140.8524
31	222895.0661	124858.7339	141.6578
32	222898.676	124858.9259	141.5061
gpsbase	222890.7653	124868.687	140.8175

Point Id 6/05/08	Easting	Northing
gpsbase	222841.5774	124964.5712
gpeg18	222870.1296	124854.4445
gpeg17	222889.7917	124858.1307
gpeg16	222910.3876	124860.9088
gpeg15	222903.5342	124879.4603
gpeg14	222884.6012	124873.1379
gpeg13	222865.7346	124866.956
gpeg12	222859.8223	124884.4055
gpeg11	222878.168	124892.1404
gpeg10	222897.0344	124898.4181
gpeg09	222890.4467	124917.4525
gpeg08	222872.0194	124909.6112
gpeg07	222853.5555	124902.0125
gpeg06	222846.2127	124923.0867
gpeg05	222865.1129	124929.6933
gpeg04	222883.9264	124936.2918
gpeg03	222877.3401	124955.2934
gpeg02	222858.4465	124948.6309
gpeg01	222839.4973	124941.9109

f22	222815.3035	124842.9648
f21	222819.3292	124843.8537
f20	222842.9271	124848.9962
f19	222852.4196	124850.8437
f18	222863.8251	124853.0124
f17	222877.3953	124855.6407
f16	222893.3702	124858.3964
f15	222899.0871	124858.4784
f14	222905.3121	124857.8884
f13	222911.4909	124857.0395
f12	222913.129	124856.0911
f11	222913.8607	124857.2724
f10	222914.2788	124864.8604
f09	222912.6522	124869.909
f08	222908.7047	124880.7271
f07	222904.0678	124891.876
f06	222899.6447	124902.3932
f05	222894.484	124914.8565
f04	222889.2335	124929.3322
f03	222884.1106	124944.9833
f02	222879.9819	124956.2474
f01	222877.3813	124960.9675

Point Id 09/05/08	Easting	Northing
sec38	222853.878	124979.1923
sec37	222853.5426	124978.9861
sec36	222853.36	124979.1779
sec35	222853.8338	124978.1116
sec04	222856.9441	124982.357
sec03	222857.3003	124981.7917
trench05	222853.5629	124978.1657
trench04	222868.3339	124981.8615
trench03	222867.5544	124984.804
trench02	222852.7268	124981.5175
trench01	222853.5465	124978.2112
sec02	222855.5382	124978.5421
sec01	222853.345	124978.1994
fnce89	222910.9948	124858.3262
fnce88	222903.5295	124859.0893
fnce87	222887.7688	124858.7743
fnce86	222869.6354	124855.4031
fnce85	222851.6888	124852.1182
fnce84	222829.5911	124847.5515
fnce83	222801.3906	124841.146
fnce82	222780.7164	124836.7981
fnce81	222750.746	124829.5903
fnce80	222728.86	124823.5394
fnce79	222707.6591	124818.1327
fnce78	222685.9629	124812.6311
fnce77	222664.6218	124807.1226
fnce76	222646.8736	124802.6888
fnce75	222636.8945	124800.7269
fnce74	222631.7962	124811.2801
fnce73	222616.0124	124806.5579
fnce72	222618.1556	124812.3705
fnce71	222620.2747	124825.4398
fnce70	222621.3892	124845.9251

fnce69	222622.7591	124866.9027
fnce68	222625.12	124892.1403
fnce67	222623.1046	124917.9559
fnce66	222621.1254	124936.5948
fnce65	222618.5828	124955.9851
fnce64	222616.7197	124980.4649
fnce63	222618.5892	125010.6639
fnce62	222608.4575	125049.2959
fnce61	222601.7488	125077.8071
fnce60	222593.9306	125100.5784
fnce59	222578.3053	125139.662
fnce58	222561.6569	125177.21
fnce57	222550.8271	125202.8232
fnce56	222548.0702	125222.3968
fnce55	222554.9117	125242.1881
fnce54	222556.4573	125266.3651
fnce53	222552.8232	125283.8922
fnce52	222546.9872	125303.8887
fnce51	222547.5653	125327.9206
fnce50	222550.0539	125340.8121
fnce49	222552.7493	125358.001
fnce48	222551.2375	125376.2322
fnce47	222549.3437	125390.7497
fnce46	222547.6258	125406.3172
fnce45	222551.1144	125422.1191
fnce44	222579.9457	125419.6477
fnce43	222592.9001	125418.8479
fnce42	222609.9452	125417.4102
fnce41	222625.0215	125414.1854
fnce40	222639.873	125411.0561
fnce39	222651.302	125407.9656
fnce38	222659.0721	125409.1852
fnce37	222663.6565	125399.8352
fnce36	222665.1814	125388.4419
fnce35	222667.3612	125376.7688
fnce34	222672.1549	125356.9859
fnce33	222679.1194	125338.0151
fnce32	222688.3814	125319.7505
fnce31	222696.1309	125306.3405
fnce30	222711.3543	125288.1879
fnce29	222720.453	125276.8985
fnce28	222730.1057	125261.3353
fnce27	222738.8692	125244.0737
fnce26	222744.6989	125232.4704
fnce25	222749.979	125221.7431
fnce24	222759.6475	125205.0002
fnce23	222769.7402	125192.6469
fnce22	222778.3484	125180.8752
fnce21	222789.4057	125178.0447
fnce20	222806.4428	125171.5505
fnce19	222820.0888	125165.6115
fnce18	222831.9364	125157.3525
fnce17	222839.9834	125152.3884
fnce16	222846.7023	125143.7255
fnce15	222849.5093	125115.1
fnce14	222851.9857	125090.9724
fnce13	222854.7242	125069.7991
fnce12	222858.4931	125045.9021
fnce11	222862.8227	125022.0571
fnce10	222867.0941	124998.0574
fnce09	222870.0393	124982.0668
fnce08	222874.3915	124969.1646
fnce07	222881.4775	124953.1904
fnce06	222888.912	124930.2595
fnce05	222896.6424	124908.8722
fnce04	222903.848	124892.7832
fnce03	222910.5253	124876.3942
fnce02	222914.14	124865.8471
fnce01	222913.3215	124858.1569
folly09	222642.9752	125080.639
folly08	222637.8622	125080.9004
folly07	222637.818	125087.2496
folly06	222643.1821	125086.9516
folly05	222643.0553	125085.0771
folly04	222642.4608	125085.3998
folly03	222642.0759	125081.0421
folly02	222643.0264	125082.1245
folly01	222642.9779	125080.6356
27	222867.3539	124984.5441
26	222866.3898	124984.2218
25	222866.5702	124983.9864
24	222867.3613	124983.3837
23	222866.2724	124983.3963
22	222867.415	124982.6692
21	222867.2725	124981.6866
20	222866.387	124982.5442
19	222865.3088	124984.1546
18	222864.4269	124983.6955
17	222865.4476	124982.5311
16	222864.8231	124981.1673
15	222863.0442	124982.687
14	222862.4156	124980.9099
13	222860.8541	124981.909
12	222861.6045	124983.1061
11	222859.9603	124982.6637
10	222857.6721	124982.3343
9	222857.0785	124980.9868
8	222856.9354	124982.0189
7	222854.745	124981.597
6	222853.5777	124980.7236
5	222853.8171	124979.2685
4	222855.5148	124979.3424
3	222855.4882	124979.0417
2	222854.8595	124978.9596
1	222853.696	124978.9966

Table 7*. Location of excavation trench, some of the grid pegs, folly and field boundary. Reading taken using a Grid reference points were recorded with a Lecia GPS system 500 and Total Station TCR1205*

Appendix 1

9 Pottery Identification by Henritta Quinnell

A prehistoric sherd was found in topsoil during excavations of a later site at the Warren at Hartland SS232 250 directed by Penny Cunningham for the XArch Project in May 2007. The Project, supported by Exeter University and the Heritage Lottery Fund, provided archaeological support and outreach programmes to communities in Devon, Cornwall and Somerset. The sherd was a simple undecorated body sherd weighing 7g, soft, abraded, 7mm thick and reduced 5YR 3/3 dark reddish brown. It is marked WAR 08 T1. It was microscopically examined by Dr Roger Taylor who reports it contained moderate generally coarse inclusions: *amphibole* – dark to medium green, cleaved and fibrous sub-angular grains, with sparse colourless elongated grains (0.8mm), 0.2-3.5mm: *feldspar* – sparse white altered angular to sub-angular grains, 0.1-1.5mm: *composite fragment* – 2mm: *quartz* – rare colourless transparent angular grains, 0.2mm. Dr Taylor commented in addition ' A metabasic 'tempered sherd unrelated to the local geology (Carboniferous shale and sandstone) of the site. The 'nearest potential source lies along the northern flanks of Dartmoor from Okehampton westwards. 'However, given the coastal situation of the site and the possibility of coastal transport, a source 'from further to the west might be considered.'

The sherd from its general appearance seems likely to be of prehistoric date. Its petrology is somewhat similar to a Peterborough sherd found recently on Westward Ho! beach (Quinnell & Taylor 2007). It differs in material from the Early and Middle Bronze Age material of the 2nd millennium BC in that it lacks large added inclusions which are usual, though not universal, at this period. It may either be of Neolithic date or perhaps belong to the earlier first millennium BC.

Quinnell, H. and Taylor, R. 2007 'A Peterborough sherd from the beach at Westward Ho!', *Proc. Devon Archaeol. Soc.* **65**, 231–3.

Appendix 2

10 Charcoal Identification by C. J.Griffiths (University of Wales, Lampeter, Archaeological Services September 2008)

10.1 Introduction

Theone sample (War-08-T1-1) was looked at for species identification with reference to the charcoal and other charred plant macro fossils.

10.2 Methods

The charcoal identification was done using a Leica DMR microscope, using the standard reference text (Schweingruber 1978), other plant material identification was done using a Wild M5 stereomicroscope and with reference to the standard texts and modern reference material held at the palaeobotanical laboratory, University of Wales, Lampeter. Nomenclature follows Stace 1991.

10.3 Results

War-08-T1-1 was sorted initially using a Wild M5 stereomicroscope to identify any material with potential for a radiocarbon date. It was noted that the sample consists purely of oak (*Quercus* spp.). The charcoal was then looked at for round wood, which could be used for an A.M.S date. All the charcoal fragments in the sample are relatively small with one producing a reasonable ring sequence, however this was not a piece of round wood, although there was no obvious signs that it was heart wood.

10.4 Discussion

The radio carbon sample from War-08-T1 produced only highly fragmented oak charcoal, no round wood or outer fragments with bark were noted.

The charcoal from ring porous trees such as oak is not usually recommended for radio carbon date due to potential errors caused by the trees longevity.

In the case of war-08-T1 one piece of charcoal was identified as having potential for an A.M.S date, the weight of the fragment is 62mg, it has 4 rings and appears not to be heart wood.

10.5 Bibliography

Schweingruber , F. 1978 *Microscopic Wood Anatomy*

Stace C. 1981 *New flora of the British Isles* Cambridge: University Press