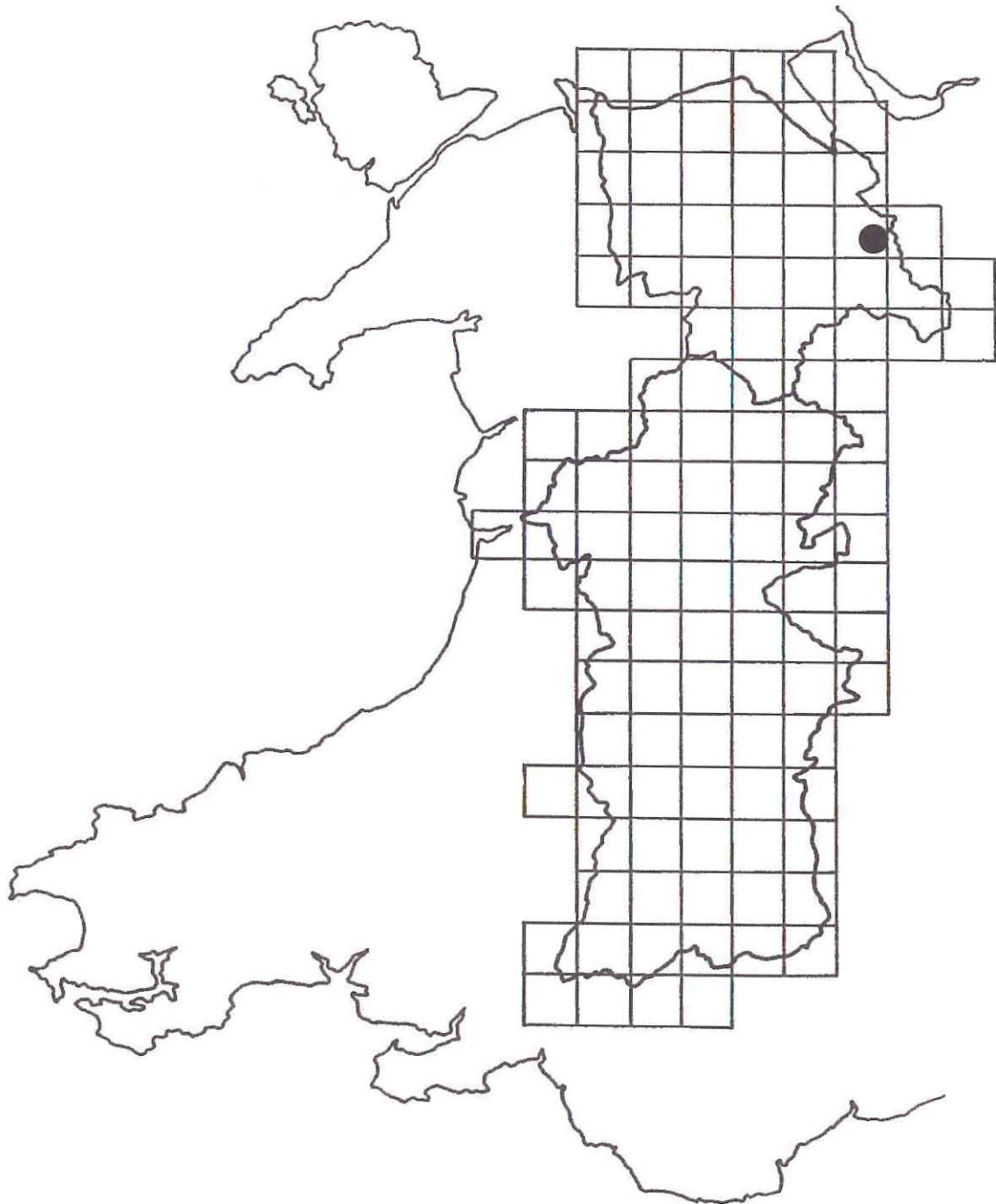


*Proposed Quarry on the Holt Estate
at Borrass, near Wrexham*

FIELD EVALUATION



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at Borrass, near Wrexham*

FIELD EVALUATION

by R Hankinson

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Report prepared for Bodfari (Quarries) Ltd

The Clwyd-Powys Archaeological Trust

7a Church Street Welshpool Powys SY21 7DL

tel (0938) 553670, fax 552179

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Summary

The following report presents the results of an archaeological field evaluation of the area of a proposed sand and gravel quarry on the Holt Estate near Wrexham, owned by Bodfari (Quarries) Ltd.

A total of thirteen sites were identified within the area examined. Of the sites identified, three occur outside the proposed area of extraction and tree planting; five require further investigation before their importance can be determined; and four sites are recommended for further archaeological recording.

Sites which fall outside the proposal area have been considered where they are considered to be of relevance to its archaeological resource. One site is included as it may be subject to a residual impact on implementation of the proposal; in addition, the proximity of two important scatters of flint artefacts, of Mesolithic date, suggests that there is a possibility for further flint finds of this period to be discovered within the area of the proposal.

1 Introduction and Methodology

1.1 On the 23rd November 1994, the contracting arm of the Clwyd-Powys Archaeological Trust (CPAT Contracting) was asked by Mineral Surveying Services of Shepshed, Leicestershire, to provide a quotation for an evaluation of the archaeology on a proposed sand and gravel extraction site at Borrass, near Wrexham in Clwyd. The evaluation was required as an integral part of an Environmental Statement being prepared for Bodfari (Quarries) Ltd in support of their planning application.

1.2 The quotation prepared by CPAT Contracting was accepted in writing on the 15th December 1994 and the evaluation was carried out in late December and early January 1995.

1.3 The evaluation comprised two elements: an initial desk-top study, followed by field survey. On completion of the two elements, the report detailed below was prepared.

2 Geographical Background

2.1 The area which is considered in this evaluation covers approximately 0.8 sq km, located 1km to the north-east of the outskirts of Wrexham in Clwyd, at SJ 3580 5340.

2.2 The topography of the area is undulating, ranging from 60mOD to 81mOD, and contains sizable hollows of glacial origin. The glacial sand and gravel deposits are overlain by a layer of well drained sandy soil of the Newport 1 Soil Association (Rudeforth et al 1984). This soil is fertile and suitable for arable agriculture, as is evident from the Grade 2 land classification applied to the evaluation area.

3 Desk-top Study

3.1 Readily available documentary, cartographic and aerial photographic sources were consulted during the initial research. The detailed references to these sources can be found in Section 9. A short synopsis is, however, included here to indicate which repositories have been examined.

3.2 The Regional Sites and Monuments Record (SMR) maintained in Welshpool contains a record of all known archaeological sites: no sites have been previously recorded within the area of the evaluation and, in consequence, all the sites described in this report have been identified solely as a result of the evaluation procedures.

3.3 A number of documentary, cartographic and manuscript sources relating to the area are held by the National Library of Wales at Aberystwyth (NLW) and the Clwyd Record Office at Hawarden (CROH). It should be noted in passing that though the area fell within the old county of Denbighshire, the records for which are generally kept in the Clwyd Record Office at Ruthin, most of the manuscript material and apparently all of the early cartographic sources, can be found at Hawarden.

3.4 Four collections of aerial photographs were examined, in a search for sites which can either be detected solely as cropmarks from the air, or whose interpretation can be aided by an aerial overview. Three collections, dating from 1974 to 1993, are held by the Architects Technical Planning Library, Clwyd County Council in Mold. The fourth collection consists of aerial photography taken immediately after the Second World War by the RAF. This is held by the Air Photographs Unit of the Welsh Office in Cardiff.

4 Field Survey

4.1 Field survey was carried out by walking regularly spaced transects, modified to suit the local field pattern. Owing to the open nature of the ground a maximum separation between transects of 50m was adopted, although in practice the separation achieved was often significantly less than this maximum figure.

4.2 The primary role of the field survey was to assess the nature of those sites identified by the desk-top study, determining the survival of above-ground features. In addition, a search was conducted for previously unrecorded sites.

4.3 Extant sites were described, measured, photographed and sketched as appropriate.

5 Impact Identification

5.1 The archaeological sites identified during the evaluation are detailed below, in the form of a gazetteer. It should be noted that the evaluation area is that shown on the accompanying map and equates with the planning proposal submitted by Bodfari (Quarries) Ltd. Sites adjacent to, but outside, this area are not generally referred to in the report unless there is a possibility that they may be subject to a residual impact.

Site 1 "Pit Field" (SJ 3580 5390).

A sub-rectangular field depicted on an estate map dated 1767. Examination during the field survey showed that it has since been amalgamated with other fields in its vicinity; none of its former boundaries is in use at the present time. The field occupies a promontory position and is distinguished by its interior ground level being between 0.5m and 2.0m higher than the surrounding area. The area enclosed measures 72m north-west/south-east and varies in width between 47m at its south-eastern end and 58m at its north-western end. A ditch, 0.2m deep by 1.2m wide, is visible outside the south-eastern boundary of the field.

The field also contains ridge and furrow cultivation (Site 2), but it appears unlikely that this relates in any way to the earthwork described in the previous paragraph. Instead there is

at least a possibility that this could be an embanked enclosure on the promontory, perhaps surrounding an earlier farmstead. A hoard of Roman coins, the latest of which has been dated to the end of the 4th century, was discovered in the garden of the house known as "The Elms", some 400m to the east-north-east of the earthwork. Conceivably the enclosure might be contemporary with the hoard, but such a hypothesis really needs to be based on more substantive evidence.

Site 2 Ridge and Furrow cultivation (SJ 3583 5385).

A tract of ridge and furrow cultivation is most probably of post-medieval date owing to its small size (0.2m high only) and the relatively narrow separation of 3m between adjacent furrows. "Pit Field" is largely occupied by these cultivation traces, as is the narrow field immediately to its south-east.

Site 3 "Hesketh's Tenement" (SJ 3592 5367)

The house associated with this defunct smallholding is depicted on the estate map of 1767. The estate map appears to depict houses on their correct alignment and in relative proportion to their actual size, and not in a standardised manner; in this case the house depicted measures approximately 8m east/west by 4m north/south. It appears that by the time the Burras (Borras) Hovah Tithe map was compiled in 1839 only the memory of its existence remained for the field was called "Old House Field", the map reveals no evidence of a surviving building.

No surface traces of the house can be recognised now. In consequence, the location ascribed is based on the relative locations of features seen on the 1767 estate map.

Site 4 Ridge and Furrow cultivation (SJ 3615 5350)

An area of ridge and furrow cultivation, aligned north-west/south-east, consists of low earthworks, approximately 0.2m high with a separation of 6m between adjacent furrows. This may indicate a medieval origin.

Site 5 Cropmark (SJ 3627 5348).

A possible cropmark composed of two adjacent circles, each perhaps 10m in diameter, was recognised on RAF aerial photographs taken in 1946 (RAF/106G/UK 1454/4011-13) and possibly also on an aerial photograph taken in 1974 (35 74 134). The nature of this site is unclear and its authenticity could be demonstrated only by further work.

Site 6 Trackway (SJ 3647 5348)

An earthwork bank measures approximately 100m north-north-west/south-south-east by 20m across by 0.7m high. The Burras (Borras) Hovah Tithe map of 1839 describes the feature as an "Occupation Road", presumably referring to an agricultural

trackway. To the north-east of this feature, and immediately outside the evaluation area, is a long, narrow field on the same alignment, called "Two Butts" on both the 1767 estate map and the Tithe map. This name is one found in medieval open field agriculture, and is probably a reflection of the nature of land-use here during that period.

Site 7 Area of Clay Extraction and Brickmaking (centred at SJ 3620 5330).

The most obvious feature of this activity, still extant, is a dumb-bell shaped hollow at SJ 3622 5341, measuring 45m north-west/south-east by 22m north-east/south-west by over 2m deep, with standing water at the bottom. The hollow is composed of two discrete hollows with a low ridge separating them. This is suggestive of a former use for mineral extraction.

A field called "Brick Kiln Field", alongside the road through Borrass and to the south of the dumb-bell shaped hollow mentioned above, is depicted on the 1767 estate map; it also appears as "Brick Field" on the 1839 Burras (Borrass) Hovah Tithe map. The estate map depicts a further six pits in the area and it seems likely that some of these would have been used for mineral extraction.

The field name mentioned above confirms that the material extracted was clay, used for brick making purposes, and that it was fired locally (See also Sites 12 and 14). A probable date range for this activity is suggested by the fact that a number of the pits were described as waterlogged on the estate map of 1767. Brick was first introduced to Wales as a building material in 1567 (Smith 1988), so it is reasonable to assume that the activity occurred in the intervening period. The bricks were most probably used in the construction of nearby houses (see Site 14).

Site 8 Brick-built huts (SJ 3570 5310).

Two roofed, brick-built huts are presently in agricultural use. One has four windows (on one level) and a chimney, the other has one door only and was probably a storeroom.

It seems most likely that these structures are related to the former airfield at Borrass, which, from its triangular runway plan, would appear to have been constructed during the Second World War.

Site 9 Cropmarks (SJ 3560 5306).

A group of cropmarks apparently comprised of overlapping circles, covering an approximately circular area 60m in diameter. The marks can be seen on a colour air photograph taken in 1993 (100 93 169), but what they represent is difficult to determine from the photographic evidence. A possible interpretation is suggested by the 1842 Borrass Riffre Tithe map which names a former field in the immediate vicinity as "Erw Pwll Warren". The 1839 Burras (Borrass) Hovah Tithe map names an

adjacent field, alongside the road, as "Cae Pwll and Warren". It is further evident from a 16th-century survey of the lordship of Bromfield and Yale that an area in the locality called "The Warren", with a perimeter of one and a half miles, was converted from a rabbit warren to farmland at the end of the reign of Henry VIII.

In view of the above, it is possible that the marks seen on the aerial photograph are representative of a former rabbit warren, perhaps of artificial origin.

Site 10 "White House" (SJ 3544 5292).

A small rectangular house, aligned east-north-east/west-south-west, is depicted on the 1839 Burras (Borras) Hovah Tithe map; it falls outwith the area covered by the 1767 estate map. It was named on the first edition Ordnance Survey 1:10560 map (Denbighshire 29NW), surveyed in 1872. However, no traces can be seen on the second edition 1:2500 Ordnance Survey map (revised 1898), and it appears that the house had been demolished in the intervening period. A slight rise in ground level near the corner of the field represents its location.

Site 11 House (possibly a Smithy) (SJ 3591 5301).

A small rectangular building, aligned north-west/south-east, is depicted at this location on the 1767 estate map. The adjoining field name of "Smithy Field" on this map which is also evident on the 1839 Tithe map suggests that it was used as a smithy, although the building was apparently no longer extant when the Tithe map was drawn.

It should be noted that a building aligned north-east/south-west is depicted on the modern Ordnance Survey 1:2500 map (SJ 3553), to the north-west of this location. This building is no longer extant and should not be confused with Site 11.

Site 12 Mound (SJ 3628 5325).

An oval or sub-rectangular earthwork mound, measuring 20.0m north-east/south-west by 17.5m north-west/south-east by 1.2m high max.

Possible interpretations of the feature include: a waste heap created by the installation of the nearby gas pipeline, a brick kiln related to Site 7, or a prehistoric funerary monument of Bronze Age date.

Site 13 Gravel Pit (SJ 3593 5329)

A gravel pit, c 20m in diameter, is marked on the second edition Ordnance Survey map that was revised in 1898. No evidence remains at this location.

Site 14 "Walnut Tree Farm" (SJ 3639 5330).

A group of farm buildings which are located outside the immediate area of the proposal, but may be subject to a residual impact.

The farm is depicted on the 1767 estate map. Former names for the farm, used on maps, are: Borrás Higher Farm and Borrás Farm. Comparison between the map and the surviving buildings suggests that three or more of the buildings, probably including part of the house, are those depicted in 1767. It seems probable that the bricks for these buildings were made locally (see Site 7). Other dwellings in the area of similar construction have been dated to the 17th and early 18th centuries by various sources (detailed in the SMR), and there seems no reason to suppose that a similar date cannot be ascribed to the buildings depicted at this location on the 1767 map.

6 Recommended Mitigation Measures

6.1 The mitigation measures thought necessary for the individual sites identified in Section 5 are detailed below.

Site 1

The site falls immediately outside the currently proposed area of extraction. If the area is subsequently expanded to include the site or there is the possibility of works associated with the extraction affecting it, a detailed EDM survey combined with archaeological trial trenching, on the line of the site boundary and at the highest point of the enclosed area, should be carried out. The nature of the earthworks should be assessed on completion and in the light of the results an appropriate mitigation strategy should be implemented.

Potentially this site could be of significant importance, and subsequent recommendations may reflect this.

Field walking of ploughed land in the adjacent field to the south may produce artefacts which shed further light on the nature of the site. Contact should be maintained with the farm tenant in order to facilitate this approach.

Site 2

The ridge and furrow cultivation falls outside the presently proposed area of extraction. However, as with Site 1 if the area of activity associated with extraction is subsequently expanded to encompass the site, it is recommended that a measured survey of the extant features is carried out before site work commences.

Site 3

In view of the degree of uncertainty regarding the precise location of the house, a programme of archaeological trial trenching should be carried out at the location depicted on the accompanying map (Fig 1). The size and alignment of the house should be taken into account when the siting of trenches is determined; it is more likely that features will be encountered if the trenches are aligned north/south.

If surviving features of the house are identified within the area of trial excavation, their importance should be assessed to determine whether any further mitigation is required.

Site 4

It is recommended that a detailed EDM survey of the extant cultivation features is carried out before site work is implemented.

Site 5

Prior to implementation of the proposal, archaeological trial trenching should be carried out at the location of the cropmark. If evidence for sub-surface features is revealed, these should be examined to determine their nature and dating. On completion of the trial excavation, a suitable mitigation strategy for the site should be prepared.

Site 6

Prior to implementation of the proposal, a trench should be machined across the bank under archaeological supervision; any archaeological features revealed should then be recorded.

Site 7

The most significant feature of this activity is the kiln, suggested by a field name on the 1767 esate map. The location of the kiln is unknown, but may be revealed by the archaeological excavation recommended for Site 12.

If no further information is forthcoming from the Site 12 excavation, a watching brief should be carried out during any topsoiling operations, prior to mineral extraction. The aim of the watching brief should be to identify the location of the kiln, in order to allow an appropriate level of recording, probably including limited excavation, to be carried out prior to its impending destruction.

Site 8

A photographic record of the two huts should be carried out once the agricultural material is removed. Further archaeological input is not considered to be necessary.

Site 9

Prior to implementation of the proposal, archaeological trial trenching should be carried out at the location of the cropmarks. If evidence for sub-surface features is revealed, these should be examined to determine their nature and dating. On completion of the trial excavation, a suitable mitigation strategy for the site should be prepared.

Site 10

An archaeological excavation should be carried out to determine the nature and, if possible, the date of the house. This should take the form of a trench aligned longitudinally with the house, at the location depicted on the first edition Ordnance Survey map.

If surviving features of the house are identified within the area of trial excavation, their importance should be assessed to

determine whether any further mitigation is required.

Site 11

It seems most likely that this building was located in the approximate position of "Moss Bank" house, and therefore outside the proposed area of extraction. If current plans for this area are modified, it may be necessary to consider archaeological trial excavation at the location shown on the accompanying map (Fig 1).

If surviving features of the building are identified within the excavated area, their importance should then be assessed to determine whether any further mitigation is required.

Site 12

Archaeological trial trenching should be carried out in view of the uncertainty about the nature and dating of the mound. If it is proved to be archaeological in nature, proposals for a suitable mitigation strategy will then be required.

Site 13

In view of its minor importance and relatively recent date, no mitigation strategy is considered to be necessary for this site.

Recommendations for areas in which no specific archaeological sites were discovered

Two finds scatters (PRNs 101653 and 101654) are recorded in the Sites and Monuments Record, the nearest of which is some 400m to the south-east of the proposal area. These scatters are represented by a number of flint artefacts of Mesolithic date, found in the vicinity of Borrass Farm, and represent significant prehistoric discoveries. In view of the proximity of the proposal area to these scatters, systematic field walking of any ploughed ground should be carried out to determine whether further flint scatters occur in the proposal area.

7 Residual Impacts

7.1 One site may be subjected to a residual impact, an appropriate mitigation strategy is detailed below.

Site 14

Until more information concerning the dating of the house and buildings becomes evident, it seems reasonable to assume that they date to the 17th or early 18th century. In view of this relatively early dating sympathetic landscaping or tree planting should be carried out in this locality, in order to minimise the effects of the proposal.

8 Acknowledgements

The writer would like to thank the staff of the following repositories and organisations for their help and assistance:

the Architects Technical Planning Library, Clwyd County Council, Mold for permission to view their aerial photographic collections

the Air Photographs Unit, Welsh Office, Cardiff

the National Monument Record, RCAHMW, Aberystwyth

the Clwyd Record Office, Hawarden

the National Library of Wales, Aberystwyth

the SMR at the Clwyd Powys Archaeological Trust, Welshpool

9 Sources

9.1 Printed Sources

Rudeforth et al, 1984 Soils and Their Uses in Wales Soil Survey of England and Wales Bulletin No 11 (Harpenden)

Smith P., 1988 Houses of the Welsh Countryside HMSO (London)

Sylvester D., 1969 The Rural Landscape of the Welsh Borderland (London)

c.1545 Tidderley's Survey of the Manor of Bromfield and Yale (Extract from Archaeologia Cambrensis Vol 6 [1907], held by NMR)

9.2 Cartographic Sources

a) Held by the Clwyd Record Office, Hawarden

1767 Estate map of lands near Wrexham (D/GW/661)

1823 Acton Hall Estate records (D/AH/24)

1876-81 First edition Ordnance Survey 1:10560 map (Denbigh 29), surveyed 1872

b) Held by the National Library of Wales, Aberystwyth

1839 Burras (Borras) Hovah Tithe map

1842 Borrass Riffre Tithe map

1899 Second edition Ordnance Survey 1:2500 map (Denbigh 29.1), revised 1898

c) Other Cartographic Sources

1979 1:625000 Agricultural Land Classification map of England and Wales (Ministry of Agricultural Fisheries and Food)

9.3 Aerial Photographic Sources

a) Held by the Architects Technical Planning Library, Clwyd County Council, Mold

Meridian Airmaps Ltd, for Clwyd County Council 35 74 134 and 152 (Scale 1:10000) taken on 14-06-1974

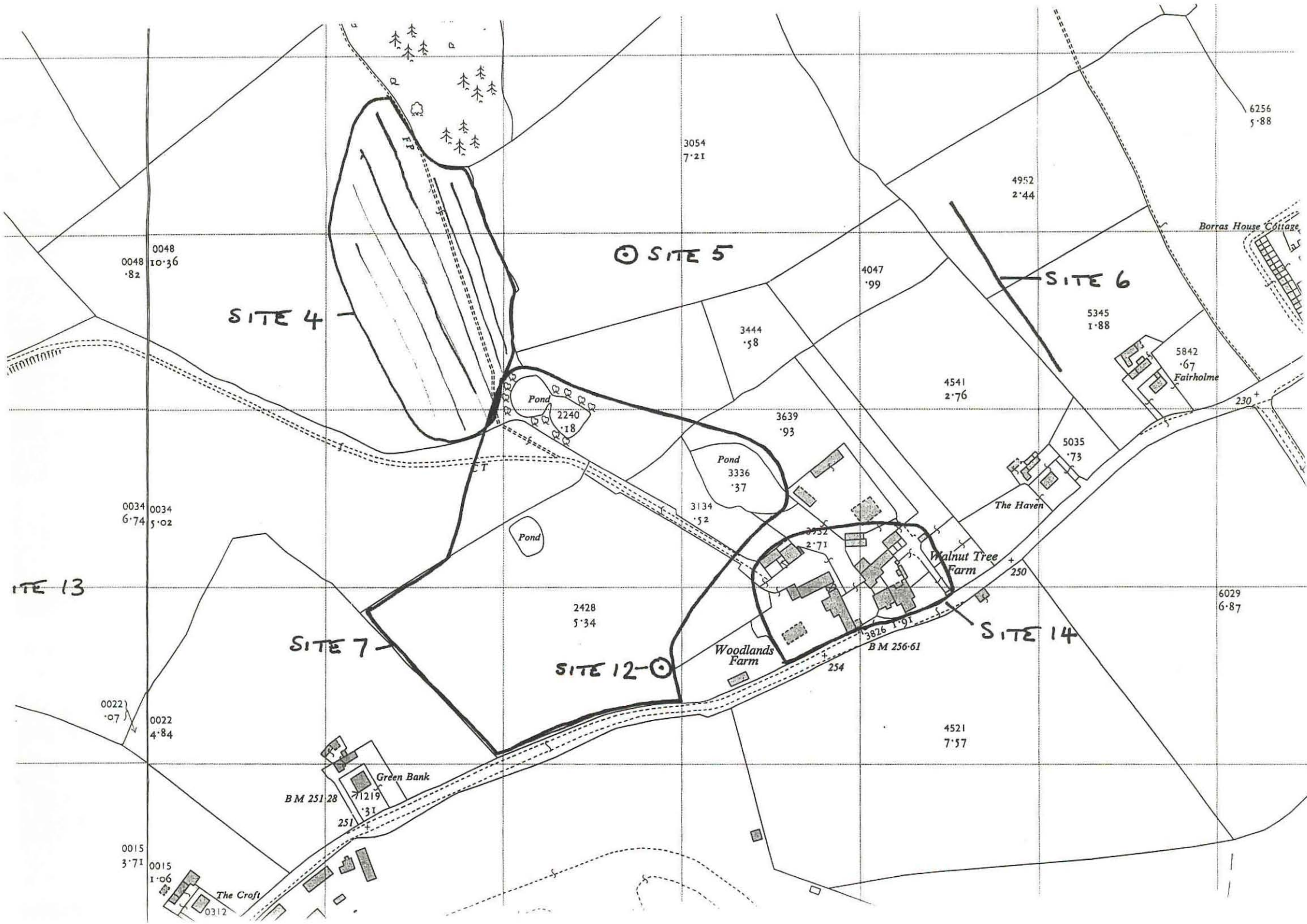
J.A. Story and Partners, for Clwyd County Council 18 85 233 (Scale 1:10000) taken on 01-06-1985

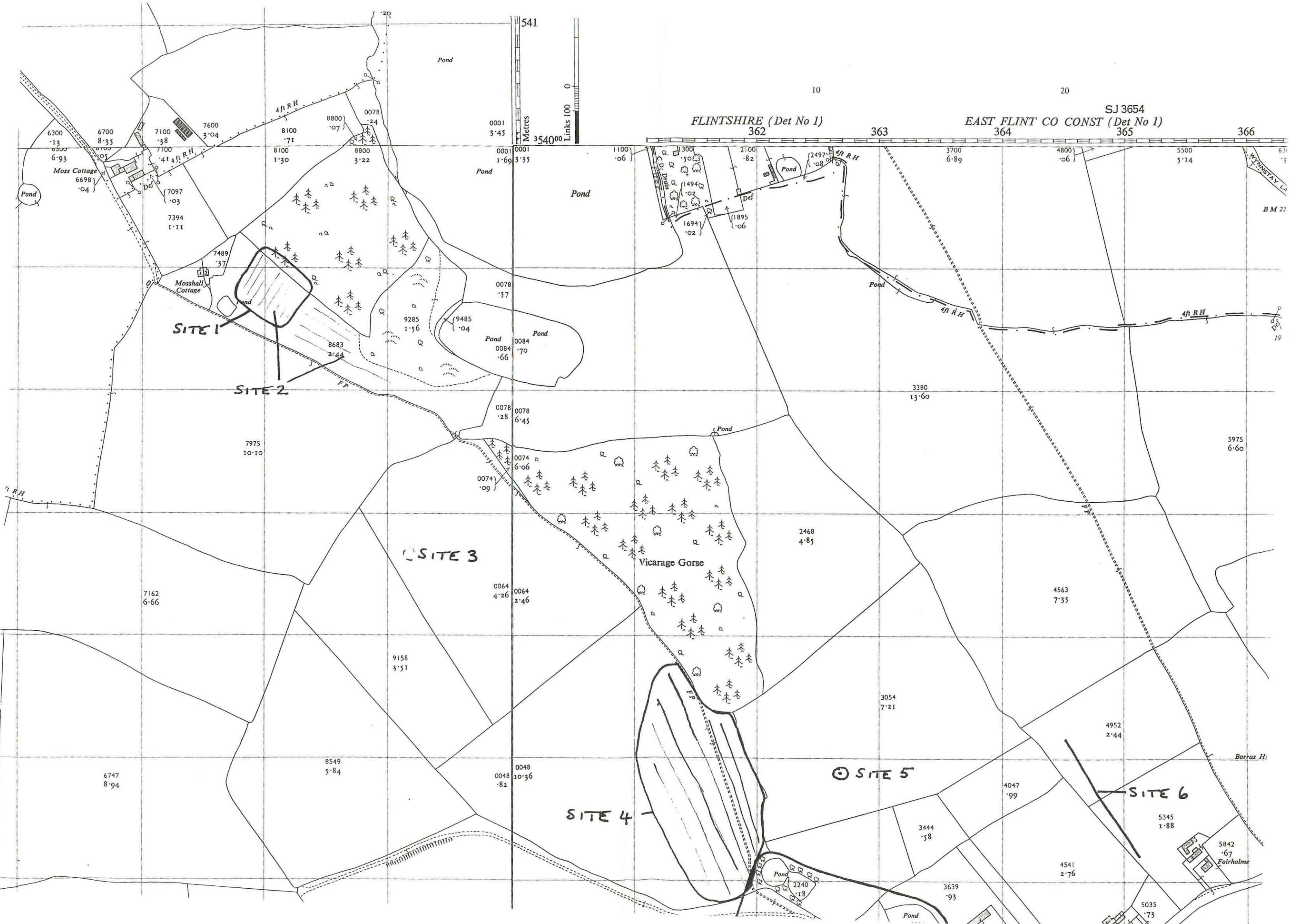
Geonex, for the Countryside Council for Wales 100 93 169 (Scale 1:10000) taken on 26-08-1993

b) Held by the Air Photographs Unit, Welsh Office, Cardiff

RAF/106G/UK 1454/4011-13 (Scale 1:9840) taken on 02-05-1946

RAF/3G/TUD/UK 192/6110 and 6192 (Scale 1:9840) taken on 09-05-1946







937
30

3126
3.76

4826
10.16

4812
3.68

Pond
3400
1.96
353

4600
1.11

5400
1.59

6100
4.40

6800
4.45

7500
1.30

8700
1.11

SITE 10

4888
3.50

4085
3.06

5682
.93

6189
3.92

6883
.12

7183
5.47

7783
.37

8085
.12

8392
2.61

BM 245.16

SITE 11

8908
.81

9203
.61

9704
.21

0008
.62

0007
19.85

0015
3.71

0015
1.06

0022
4.84

0022
.07

0034
6.74

0034
5.02

8130
5.27

6731
6.40

6717
4.57

8216
4.33

7807
2.40

SITE 13

SITE 7

SITE 12

Pond
2240
.18

Pond

2428
5.34

3134
5.52

BM 251.28
712.19

251
.31

The Croft
0312
5.19

Moss Bank

BM 245.16

Sunny Croft

Bank Croft

Canister Cottages

Greenfield

Fairfield

Airfield (Disused)

INSIDE
WALL WHITE

NO FLYING AT PRESENT
OUTSIDE
1 2
11
4
6

SCATTERED