

**THE CLWYD-POWYS ARCHAEOLOGICAL TRUST**

**Land at Glasdir, Ruthin, Denbighshire**  
**ARCHAEOLOGICAL EVALUATION**

**CPAT Report No 581**

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# **Land at Glasdir, Ruthin, Denbighshire**

## **ARCHAEOLOGICAL EVALUATION**

**I Grant and F Grant**

October 2003

Report for Welsh Development Agency

**The Clwyd-Powys Archaeological Trust**

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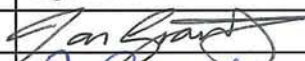



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## CPAT Report Record

### Report and status

CPAT Report Title	Land at Glasdir, Ruthin, Denbighshire: Archaeological Evaluation		
CPAT Project Name	Glasdir, Ruthin		
CPAT Project No	1111	CPAT Report No	581
Confidential (yes/no)	Yes	draft/final	Final

### Internal control

	name	signature	date
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### Revisions

no	date	made by	checked by	approved by

### Internal memo


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## **CONTENTS**

1	INTRODUCTION
2	LOCATION, TOPOGRAPHY AND GEOLOGY
3	ARCHAEOLOGICAL BACKGROUND
4	GEOPHYSICAL SURVEY
5	FIELD EVALUATION
6	CONCLUSIONS
7	ACKNOWLEDGEMENTS
8	REFERENCES
	APPENDIX 1: SPECIFICATION
	APPENDIX 2: PROJECT ARCHIVE
	FIGURES
	PLATES

## **1 INTRODUCTION**

- 1.1 In July 2003 the Contracts Section of the Clwyd-Powys Archaeological Trust (CPAT) was invited by Nathaniel Lichfield and Partners, in their capacity as consultants to the Welsh Development Agency (WDA), to prepare a specification and quotation for undertaking an archaeological evaluation on land at Glasdir, Ruthin, Denbighshire. The identification of cropmarks of potential archaeological significance on WDA land had led to the realisation that these could usefully be evaluated before the proposed development of the land reached an advanced stage and Mrs F Gale, the County Archaeologist in Denbighshire County Council, was asked to provide a design brief detailing the works required.
- 1.2 The evaluation comprised re-examination of existing aerial photographic sources, a geophysical survey and field evaluation. The design brief had also requested a topographical survey of the area should any upstanding features be determined, but following a site visit by CPAT no such features could be identified and it was agreed that this element could be omitted from the programme.

## **2 LOCATION, TOPOGRAPHY AND GEOLOGY**

- 2.1 The area of interest lies at grid reference SJ11625863 on the northern side of the built up area of Ruthin, close to the A525 and the Ruthin Livestock Market, on land earmarked by the WDA for future housing development and a school.
- 2.2 The town of Ruthin lies in the valley of the north flowing Afon Clwyd, and is bounded to the east by the Clwydian range of hills and to the west by the Bontuchel and Clocaenog hills. The area of interest lies to the west of the river, within the level flood plain at an altitude of between 50 - 60m, and is currently under pasture.
- 2.3 The solid geology of the area consists of sandstones belonging to the Undivided Permian and Triassic phase (1994 British Geological Survey map). The soils in the immediate area of the evaluation consist of alluvial gley soils belonging to the Conway Association (1983 Soil Survey of England and Wales map).

## **3 ARCHAEOLOGICAL BACKGROUND**

- 3.1 During an earlier archaeological assessment of the Mwrog Street Flood Alleviation Scheme in June 2002 anomalies were identified on early, vertical aerial photographs that might represent one or more prehistoric barrows (burial sites). These anomalies lay in a group in one field immediately to the south of the livestock market. The nature of these anomalies needed to be established in order that a suitable mitigation strategy could be identified in advance of the proposed development.
- 3.2 The aerial photographs have been re-examined in greater detail as part of the present study, with the results plotted against modern field boundaries (Fig. 2). The photographs show several cropmarks, generally of circular or sub-circular form, although their exact nature could not be determined.

## **4 GEOPHYSICAL SURVEY**

- 4.1 A geophysical survey was commissioned of the area where the cropmarks had been identified. The survey was undertaken by ArchaeoPhysica and employed an advanced geophysical technique known as caesium magnetometry. Only preliminary results were available prior to the field evaluation and these revealed no evidence for potential round barrows or ring ditches within the area, although several small and probably isolated features of potential archaeological interest were identified. None appeared to be particularly significant in its own right.
- 4.2 A re-evaluation of the survey results in the light of evidence from the field evaluation did indicate that several of the anomalies corresponded with features identified through excavation (see section 5), including a large pit in trench A, a service pipe in Trench B, and a pair of strong magnetic anomalies

which may relate to features identified on Trench C. A full technical report on the geophysical survey has been provided under separate cover (Roseveare and Roseveare, 2003).

## 5 FIELD EVALUATION

- 5.1 The field evaluation, which was undertaken between 8-12 September, comprised four excavation trenches positioned to investigate the various cropmarks which had been identified from aerial photography. Each trench was mechanically excavated onto the surface of the first recognisable archaeological horizon and thereafter all excavation was undertaken by hand. A full written, drawn and photographic record was maintained throughout and a summary of the site archive is given in Appendix 2. The location of the trenches was the subject of a total station survey, tied into field boundaries depicted on modern Ordnance Survey mapping. The numbers in brackets refer to the context numbers applied to each individual feature or layer.

### **Trench A (22.5m x 1.5m; Fig. 2, plate 1)**

- 5.2 Trench A was aligned north to south and sited across the largest, most easterly cropmark.
- 5.3 The trench revealed the natural subsoils of light yellowish-brown plastic clay (05) and loose, brown sands and gravels (06) at a depth of between 0.3-0.4m. These were overlain by a firm, brown, silty clay (02), up to 0.2m thick and containing fragments of coal and marl, and sherds of post-medieval pottery. This deposit was interpreted as a ploughsoil resulting from agriculture. The uppermost topsoil deposit (01) consisted of a dark brown, fairly loose silty sand up to 0.25m thick, containing occasional flecks of coal and small (< 0.01m diameter) rounded stones.
- 5.4 Several small, irregular, pit-like features were identified (08, 10, 12), cutting into the natural subsoils but pre-dating the post-medieval ploughsoil. The most northerly feature (10) was a shallow (0.10m deep) irregular depression extending beyond the eastern side of the trench, and filled with a grey gravel and sand (09). This feature was interpreted as the probable result of natural processes such as fluvial activity. The remaining two features (08 and 12) were interpreted as probable animal burrows. Context 08 was exposed in the western section and took the form of an irregularly shaped pit, 0.82m wide and 0.37m deep, and contained a firm, brown, silty clay fill (07) with occasional charcoal flecks. Context 12 was up to 0.45m in depth and more elongated in form. This feature extended beyond the eastern side of the trench, and contained a firm yellowish-brown silty clay fill (11), with occasional charcoal and marl flecks.
- 5.5 A large, well-defined pit (04) was revealed within the central area of the trench, which extended beyond the bounds of the trench to the west and east. The diameter of the pit, where exposed by the trench, was approximately 10.6m, and although the full depth was not ascertained, a sondage at the southernmost end recorded a depth of more than 0.6m. The pit was cut through the ploughsoil (02) but was overlain by the topsoil (01). The pit fill (03) consisted of a dirty mix of light brown sands and gravels, redeposited yellowish-brown clay, and assorted rounded stones and pebbles. Finds included 20th-century ceramics, glass and iron nails, as well as mammal (sheep) bone and teeth. This large pit is the most probable cause of the main cropmark identified from aerial photography.

### **Trench B (12.9m x 1.5m; Fig. 02, plate 2)**

- 5.6 Trench B was sited on a slightly more north-eastern to south-western alignment, and positioned on the most southerly cropmark.
- 5.7 The trench revealed the natural subsoil in this area to be predominantly loose brown sands and gravels (33), similar to deposit 06 as revealed in trench A, and lying at a depth of between 0.3m-0.4m. These were overlain by a ploughsoil deposit (32) which may be compared to layer 02, and a topsoil (21) of identical nature to layer 01.
- 5.8 Three linear features, all running in an approximate east-west direction, and extending beyond the bounds of the trench were identified cutting into the natural subsoil. The most southerly feature was a lead water pipe (25) which originally may have fed the animal drinking troughs in the surrounding fields before being replaced with plastic piping. The trench for this pipe had been cut through the ploughsoil (32) but underlay the topsoil (21).
- 5.9 The central linear feature was a ceramic land drain (22) of relatively late date, within a V-shaped cut (28).

- 5.10 At the northern end of the trench a well-defined shallow ditch or gully (31), 1.55m wide and 0.46m deep, cut through the plough soil and into the underlying sands and gravels. The primary fill (30) consisted of a brown, very soft silty clay and silty sand mix containing ceramics of post-medieval date. The secondary fill (29) consisted of redeposited yellowish-brown clay containing flecks of coal, marl, and small rounded pebbles. This fill sloped from the northern side of the ditch to its base on the southern side. The uppermost, tertiary fill comprised a brown, loose silty sand, containing small, rounded and sub-angular stones and coal fragments. The function of this feature is unknown.

**Trench C (10m x 1.5m; Fig. 00)**

- 5.11 Trench C was placed across the small, circular, northernmost cropmark, on a slightly north-western to south-eastern alignment.
- 5.12 The natural subsoils were revealed to be yellowish-brown clays (19) interspersed with areas of loose brown sands and gravels (18), comparable to layers 05, 06, and 33, and lying at a depth of between 0.3m- 0.4m. As in trenches A and B this deposit was overlain by a layer of ploughsoil (20), and topsoil (13).
- 5.13 Occupying the southernmost half of the trench, at a depth of 0.6m, was a square or rectangular concrete platform (15) lying obliquely to the angle of the trench and extending beyond the limits of the excavation. The north-western side of this platform was almost completely revealed and was approximately 2.5m in length. Surrounding the platform was an apparent foundation cut (17), 0.6m in width, and up to 0.5m deep, cutting through the ploughsoil (20). Any possible associated wall appears to have been removed, although there were remains of possible concrete blocks within the dark brown silty clay fill (16), as well as frequent fragments of coal, brick, wire, 20th-century ceramics and bottle glass. Overlying the platform was a mixed deposit (14), comprising a dark soil, with redeposited yellowish brown clay, occasional small stones and coal fragments, and 20th-century ceramic sherds and bottle glass. Although fairly dry and compact towards the upper surface, this deposit became increasingly moist where it overlay the concrete. This deposit was interpreted as a backfill after demolition of the structure. It is possible that this structure had an agricultural function, although as it is known that this field was the location of World War II searchlight batteries (Mr. Williams, pers comm) this latter function is more likely. It is undoubtedly the concrete platform and associated deposits which have resulted in the observed cropmark.

**Trench D (11m x 1.5m; Fig. 00)**

- 5.14 Trench D was located on a north-west to south-east alignment across the most westerly irregularly shaped cropmark.
- 5.15 The natural subsoils in this area were light yellowish brown clays interspersed with loose, brown sands and gravels identical to layers 05 and 06, and located at a similar depth. Overlying the subsoil was a plough soil layer (36) which may be compared to layers 02, 20 and 32, and the topsoil (36), identical in nature to layers 01, 13 and 21. Although not identified in plan, some disturbance within the topsoil was visible in the south-eastern section, represented as a band of mixed, redeposited yellow clay (35). It is possible that this disturbance produced the irregular cropmark feature identified on aerial photographs.
- 5.16 The only feature identified in plan was a shallow, irregular pit-like feature (38), up to 0.2m deep, underlying the post-medieval plough soil. This feature extended beyond the south-eastern side of the trench, but where visible had a width of 0.58m, and was interpreted as a probable animal burrow.

## 6 CONCLUSIONS

- 6.1 The evaluation showed that the cropmarks identified during the earlier archaeological assessment in June 2002 were almost certainly caused by post-medieval agricultural activity and World War II defence systems. No evidence was found to suggest the existence of prehistoric round barrows (burial sites), the potential for which had led to the initial interest in the site.
- 6.2 In Trench A the evaluation demonstrated the most probable cause of the largest cropmark to be a large modern pit of unknown depth and function, but possibly related to animal burial. This feature also corresponded with an anomaly identified during the re-evaluation of the geophysical survey results.
- 6.3 The lead service pipe in Trench B was clearly identified on the geophysical survey results. Other post-medieval activity, including the installation of drainage systems, may have contributed to the cropmark anomaly.
- 6.4 The cropmark investigated in Trench C was almost certainly caused by the concrete platform structure attributed to World War II defence systems. Strong magnetic anomalies identified in this area in the geophysical survey may also relate to this activity.
- 6.5 Little evidence was found to explain the smallest, irregular western cropmark, although some disturbance within the topsoil may be related.

## 7 ACKNOWLEDGEMENTS

- 7.1 The writers would like to thank the following people for their assistance during the project: Bob Silvester and Nigel Jones, CPAT; Fiona Gale, County Archaeologist, Denbighshire County Council; Anne and Martin Roseveare, ArchaeoPhysica; Mr Williams, Glasdir Farm; Gareth Williams, Nathaniel Lichfield and Partners.

## 8 REFERENCES

Roseveare, M J & Roseveare, A C K, 2003. *Land at Glasdir, Ruthin: Caesium Magnetometer Survey*. ArchaeoPhysica.

### *Cartographic sources*

1983 Soil Survey of England and Wales map (Sheet 2 - Wales) and Legend (1:250,000 scale)

1994 British Geological Survey map of Wales (Solid edition at 1:250,000 scale)

## APPENDIX 1

### LAND AT GLASDIR, RUTHIN SPECIFICATION FOR AN ARCHAEOLOGICAL EXCAVATION BY THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

#### 1 Introduction

- 1.1 A detailed archaeological assessment has been recommended as part of the planning process in advance of the proposed development of land at Glasdir on the northern edge of Ruthin. The assessment is the subject of a Brief prepared (in July 2003) by Mrs F Gale, the County Archaeologist for Denbighshire on behalf of Denbighshire County Council, at the request of Nathaniel Lichfield and Partners of Cardiff in their capacity as consultants to the Welsh Development Agency (WDA).
- 1.2 The area of interest lies on the northern side of the built up area of Ruthin, close to the A525 and the Ruthin Livestock Market, on land earmarked by the WDA for future housing development and a school. During an earlier archaeological assessment of the Mwrog Street Flood Alleviation Scheme in June 2002 anomalies were identified on early, vertical aerial photographs that may represent one or more prehistoric barrows (burial sites), these anomalies lying in a group in one field immediately to the south of the livestock market. The nature of these anomalies needs to be established in order that a suitable mitigation strategy can be identified in advance of the proposed development.

#### 2 Objectives

- 2.1 The objectives of the assessment are:
  - 2.1.1 to reveal by means of a combination of geophysical and topographic survey and archaeological evaluation, the nature, condition, significance and, where possible, the chronology of the archaeology within the area of the proposed development in so far as these aims are achievable utilising the methods proposed;
  - 2.1.2 to prepare a report for the client and the curator (county archaeologist) outlining the results obtained from the surveys and evaluation;
  - 2.1.3 to prepare the site archive for deposition in an appropriate repository;
  - 2.1.3 to prepare, if appropriate, a publishable report for the journal, *Archaeology in Wales*.

#### 3 Methods

- 3.1 The following stages in the assessment are anticipated, in order of completion:
  - 3.1.1 The first stage will involve the re-examination of the available vertical aerial photography, and the re-plotting, as necessary, of the visible anomalies onto a large-scale Ordnance Survey base plan in order to provide an accurate guide to their location for the subsequent fieldwork operations.
  - 3.1.2 A geophysical survey will be conducted by a competent specialist of the area of and immediately around the anomalies. The most appropriate type of geophysics technique to be used will be determined by the specialist, and will extend over an area of between 0.6-1.0 hectares. The purpose of the geophysical survey will be to determine whether any physical evidence of the anomalies survives beneath the surface of the ground and whether any other sub-surface anomalies exist in the immediate vicinity.
  - 3.1.3 A detailed topographic survey may be implemented using total station equipment, if surface traces within the field are sufficiently prominent. At present it has not been possible to determine whether such traces survive, due to the height of the vegetation. Because of this uncertainty, the cost of a topographic survey has been included only in the contingency costings.
  - 3.1.4 Following consultation with the County Archaeologist it has been determined that each of the four anomalies should be evaluated with a single trench, the dimensions measuring up to a maximum of

15m x 1.5m, although this size may be scaled down for the smaller anomalies, or alternatively scaled up in order to locate those same anomalies. If mound material survives for any of the anomalies, this may be examined to assess the surviving stratigraphy and buried soil levels, and in the event that a ditch is encountered the deposits within it may be sampled for dating and palaeoenvironmental evidence. This programme of works will be agreed with the client, and the position of the trenches will be approved by the county archaeologist, in advance of site work commencing. Any significant alterations to this scheme will only be undertaken following full consultation with the county archaeologist and client.

- 3.2 The excavations will be undertaken using a machine excavator with a toothless bucket to remove modern overburden down to the level of the first recognisable archaeological horizon. Thereafter, all excavation will be conducted by hand unless otherwise agreed with the curator in advance. The trenches will be backfilled by machine upon completion of the assessment.
- 3.3 Contexts will be recorded on individual record forms and be drawn and photographed as appropriate. All photography will be in 35mm format black and white and colour slide. All features will be located as accurately as possible with respect to buildings and boundaries identified on modern Ordnance Survey maps and levels will be related to Ordnance Datum where possible.
- 3.4 All artefacts will be related to the context from which they were derived and will be treated in a manner appropriate to their composition.
- 3.5 Following the on-site work an illustrated and bound report will be prepared according to the principles laid out in the curatorial Brief. This will be in A4 format and contain conventional sections on: Site location, Topography and Geology; Historic Background; Evaluation; Conclusions and Recommendations and References, together with appropriate appendices on archives and finds.
- 3.6 The site archive will be prepared to specifications laid out in Appendix 3 in the Management of Archaeological Projects (English Heritage, 1991).

#### **4 Resources and Programming**

- 4.1 The evaluation will be undertaken by a team of two skilled archaeologists under the overall supervision of Mr RJ Silvester, a senior member of CPAT's staff who is also a member of the Institute of Field Archaeologists.
- 4.2 All report preparation will be completed by or with the assistance of the same field archaeologist who supervised the evaluation on site.
- 4.3 It is anticipated that the geophysics survey may only take one day but that there will be a time delay before the evaluation in order to allow for the required data processing as this may assist in determining the location of the evaluation trenches. The evaluation itself will be completed within 5 days, and a report will be completed within 3 weeks of the completion of on-site works. Copies of that report will be passed to the client and to the county archaeologist and subsequently a further copy will be deposited with the Regional SMR. The county archaeologist will be informed of the timetable in order to arrange for monitoring if required. CPAT would require at least two weeks written notice before commencing works.
- 4.4 The accompanying quotation covers all aspects of the assessment, but as noted above the topographical survey has been viewed as a contingency cost, its implementation dependent on field observations yet to be made; and further contingency costs will only be required in the event that suitable dating or palaeoenvironmental materials are recovered during the evaluation.
- 4.5 Requirements relating to Health and Safety regulations will be adhered to by CPAT and its staff.
- 4.6 CPAT is covered by appropriate Public and Employer's Liability insurance.

## APPENDIX 2

### PROJECT ARCHIVE

#### Site archive

40 Context record forms  
 1 black and white negative film  
 1 colour slide film  
 1 colour print film  
 Photographic catalogue  
 2 A1 site drawings

#### Digital archive

Penmap location plan: 1091.pts

#### Finds

##### Trench A

context	Number	Weight (g)	Description	Date
01	11	23	clay pipe	17th - 18th
01	1	7	coal measures buffware	17th - 18th
01	1	8	grey stoneware	19th
01	2	9	Buckley fineware	
01	3	20	Buckley coarseware	
01	4	24	coal measures redware	17th-18th
01	2	4	mottled ware	1690 - 1760
01	2	4	bone china	19th
01	3	7	developed whiteware	19th - 20th
01	1	3	Buckley combed slipware	
01	4	23	Slipware	17th - 18th
01	4	28	local red earthenware	
01	5	162	green bottle glass	
01	1	2	blue bottle glass	
01	1	3	slate fragment	
01	2		iron nails	
01	2		black plastic (vehicle fitting?)	20th
02	3	8	clay pipe	17th - 18th
02	1	1	creamware	18th - 19th
02	1	2	refined redware	
02	5	52	Buckley coarseware	
02	3	10	coal measures red fineware	
02	1		mammal bone	
03	1	2	coal measures buffware	17th - 18th
03	1	4	bone china	19th
03	1	1	clay pipe	17th - 18th
03	2	12	slipware	17th - 18th
03	3	11	developed whiteware	19th - 20th
03	4	74	coal measures redware	
03	1	40	brown glazed coarse buffware	
03	3	10	green bottle glass	
03	2	25	clear bottle glass	20th
03	1		iron nail	
03	2		mammal (sheep) leg bones	
03	2		mammal (sheep) teeth	

## Trench B

context	Number	Weight (g)	Description	Date
21	2	10	refined redware	
21	15	328	Buckley coarseware	
21	1	4	Buckley fineware	
21	4	35	coal measures redware	17th - 18th
21	4	32	Buckley slipware	
21	2	29	slipware	17th - 18th
21	2	13	pearlware	1780 - early 19th
21	1	4	bone china	19th
21	2	3	creamware	1750 - early 19th
21	7	27	developed whiteware	19th - 20th
21	7	14	clay pipe	17th - 18th
21	2	9	green bottle glass	
21	1		oyster shell	
21	2		mammal bone	
21	1		coal cinder	
30	1	0.5	white stoneware	
30	1	1	developed whiteware	19th - 20th
30	1	29	green bottle glass	

## Trench C

context	Number	Weight (g)	Description	Date
13	1	1	mottled ware	1690 - 1760
13	1	41	white stoneware	
13	1	9	Buckley fineware	
13	1	20	slipware	17th - 18th
13	6	78	Buckley coarseware	
13	1	74	coal measures redware lid	
			handle	
13	1	1	clay pipe	17th - 18th
13	1	50	green bottle glass	
13	1		iron nail	
13	1		cockle shell	
16	1	8	graphite / slate cylinder	20th
16	1	55	Buckley coarseware	

## Trench D

context	Number	Weight (g)	Description	Date
34	1	4	slipware	17th - 18th
34	1	16	coal measures redware	
34	1	5	Buckley coarseware	
34	1	7	mottled ware	1690 - 1760
36	1	1	clay pipe	17th - 18th



Fig. 1 Site Location Scale 1:25,000

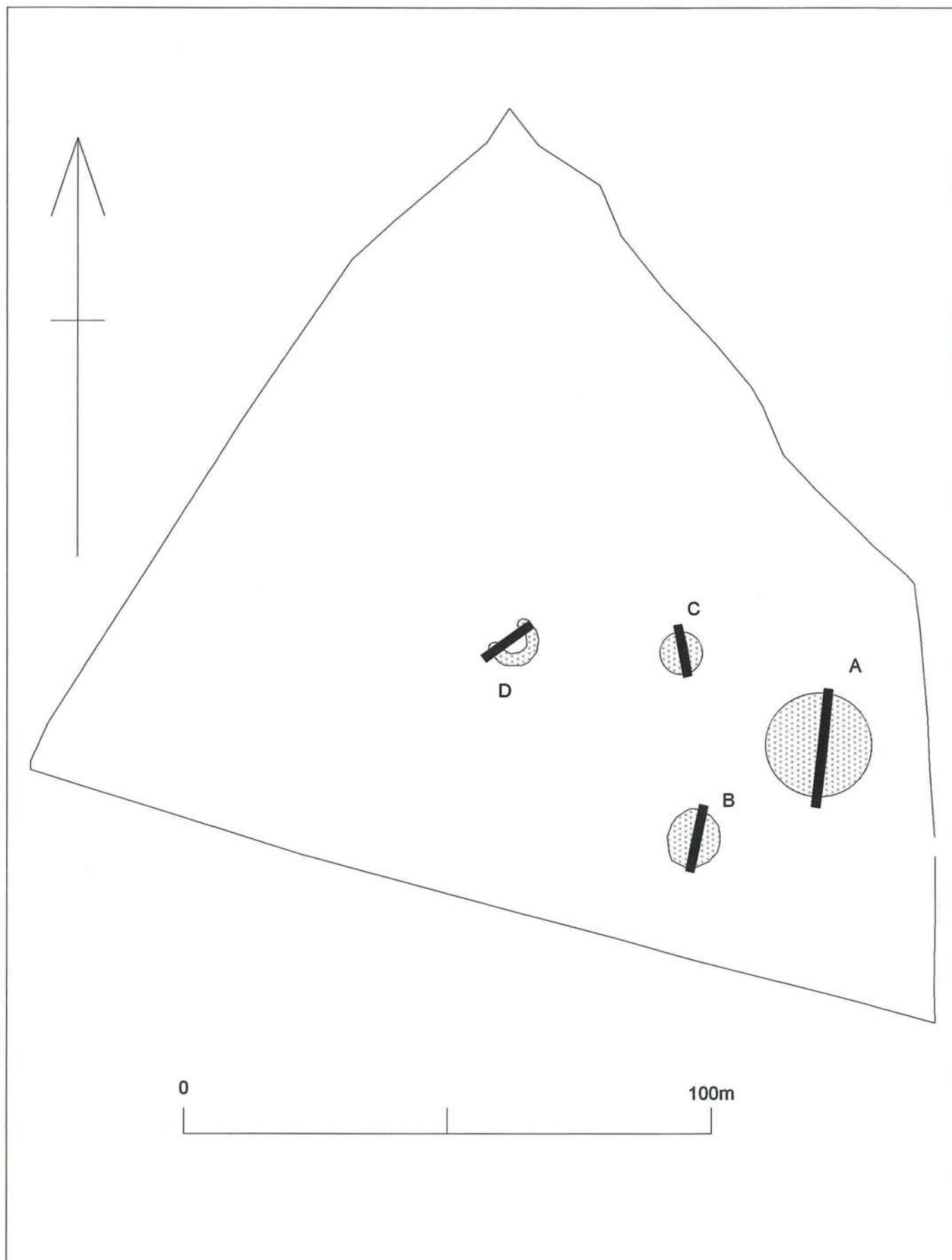


Fig. 2 Aerial photographic plot and trench location

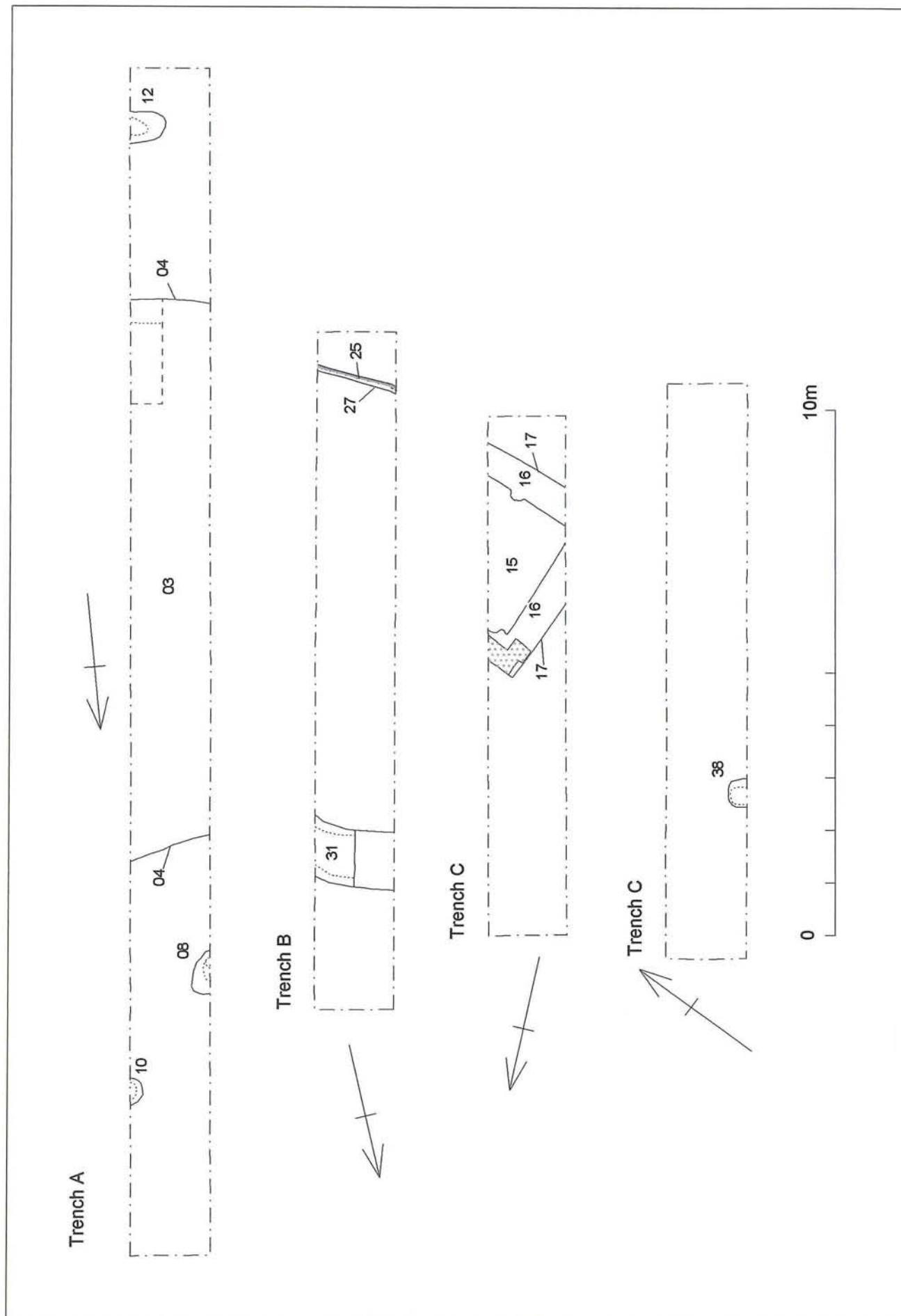


Fig. 3 Trench plans



Plate 3 Trench C, from south-east. Photo CPAT 1522/24



Plate 4 Trench D, from south-west. Photo CPAT 1522/34



Plate 1 Trench A, from south. Photo CPAT 1522/14



Plate 2 Trench B, from south. Photo CPAT 1522, 27