

5. Aerial Photograph Sites in Renfrewshire

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Over the past couple of decades the use of aerial photographs for identifying archaeological sites has really taken off. In 1976 the Royal Commission started an aerial survey programme to 'discover and record those ancient monuments which no longer survive above ground' (RCAHMS 1977).

The principles behind aerial photography are basically very straight forward. First of all if an archaeological site, for example a fort, is situated in low lying, good quality, arable land it is likely to have been ploughed and re-ploughed over the years thus destroying any upstanding remains, such as a rampart. However negative features, those cut into the subsoil, a ditch for example, will not have been damaged extensively and it is these that show on aerial photographs. This is due to the fact that over the filled in, negative features the crops grow quicker and thicker due to the higher moisture content retained therein. This differential growth results in the discolouration of crops, especially cereals, and creates patterns which can only be identified from the air. Contrastingly the growth of crops can also be effected by lack of moisture, which may indicate a stone wall under the topsoil. Crop mark sites can sometimes be identified due the shadows cast by oblique sunlight on taller crops. The combinations of reasons for specific patterns, at different times of year can be great and may not always be of archaeological origin, different geological formations producing similar effects. Fortunately the more regular patterns can be identified as anthropogenic.

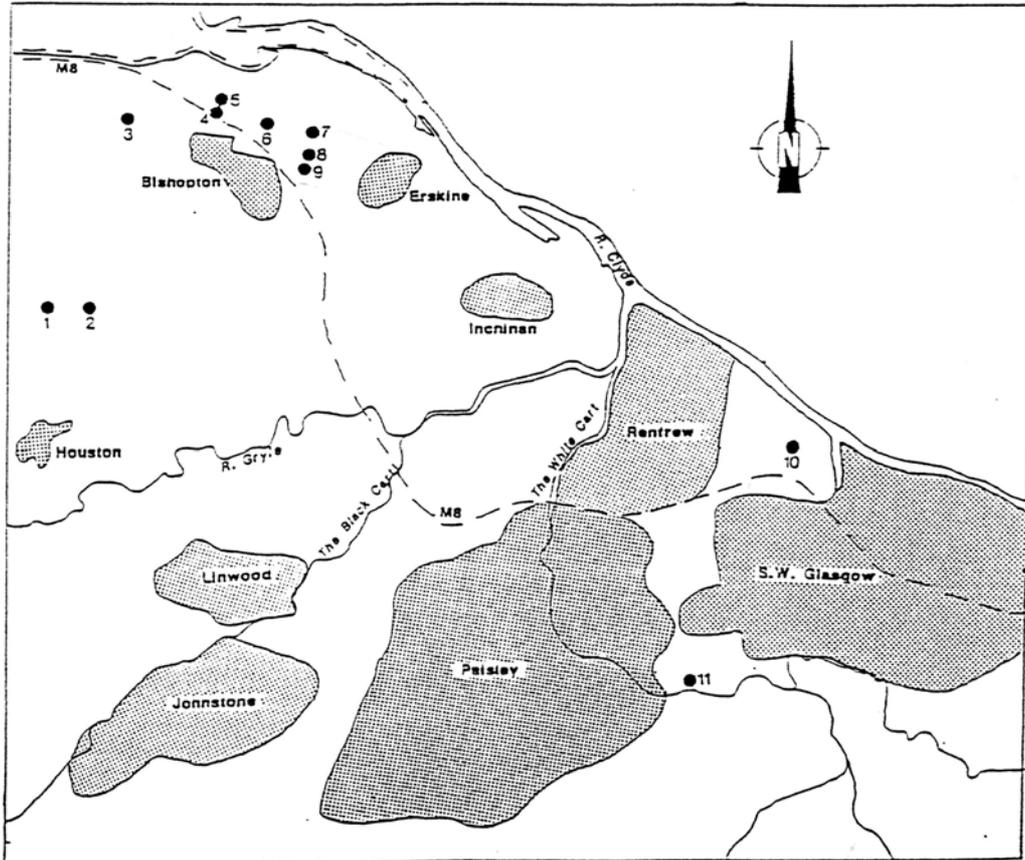
A recent article on The Archaeology of the Scottish Lowlands stated that "aerial reconnaissance has made the single most important contribution to our appreciation of the density, diversity and widespread distribution of archaeological sites in recent years" (Hanson and MacInnes1991). Unfortunately there are problems.

Hiring an aircraft is expensive and therefore this technique has to be limited to areas where the returns, i.e. the discovery of new sites, is greatest. The latter areas are the cultivated lowlands of Eastern Scotland, especially in East Lothian and Aberdeenshire. In the West the weather is damper and more land is given over to rough pasture, both of which inhibit the recovery of crop mark sites.

Furthermore there is a bias towards large enclosed sites that include negative features such as pits. It is evident therefore that smaller less permanent structures will not be found and other methods of survey such as field walking, currently being under taken by this society to locate mesolithic sites, should be employed.

Renfrewshire is mostly upland or rough pasture and therefore not ideal for the recovery or aerial photographs. However in 1977 a good summer throughout Scotland brought drought conditions which accentuate differential growth

patterns and even in Renfrewshire a handful of new sites were recorded by aerial photography. These were mostly located in the Northern part of the county along the banks of the Clyde between Renfrew and Bishopton. The following is a list of these sites found and a couple of others from subsequent flights.



1. Distribution Map of Aerial Cropmark Sites in N. E. Renfrewshire

1. NCR. 405 690
NB 46 NW - 23 (1:10 000 map sheet no. and NMR no.)
Barochan Hill, Houston
Fort - Iron Age or Feudal
Land use- NW field ploughed 1991, NE field to be ploughed 1992.
2. NGR.
NB 46 NW - ?
Barochan Hill, Houston
Roman fort - Flavian
Land use- rough pasture
3. NCR. 827 208
NB 47 SW - 20
Whitemoss Erskine.
Roman fort - Antonine.

Land use - rough pasture

4. NCR. 432 722
NB 47 SW - 39
Longhaugh Lodge, Erskine.
Ring-ditch enclosure - prehistoric.
Land use- ploughed.
5. NCR. 432 724
NB 47 SW - 42
Longhaugh Lodge, Erskine.
Possible enclosures - prehistoric.
Land use - ploughed.
6. NCR. 439 719
NB 47 SW - 40
Richieston, Erskine.
Enclosure - prehistoric.
Land use - under sown grass.
7. NCR. 447 718
NB 47 SW - 41
Kirkton, Bishopton.
Possible annular earthwork - prehistoric.
Land use - under sown grass.
8. NCR. 447 714
NB 47 SW - 44
Drumcross, Erskine.
Enclosure 2 - prehistoric.
Land use - ploughed.
9. NCR. 447 712
NB 47 SW -
Drumcross, Erskine.
enclosure 1 - prehistoric.
Land use - under winter crop (barley)
10. NCR. 523 668
NB 56 NW - 15.
Shiels, Govan.
Possible class 2 henge - prehistoric.
Land use - scrub.
11. NGR. 5066 6314
NS 56 SW 10.
Rosshall, Paisley.

Circular enclosure - prehistoric.
Land use - rough pasture, adjacent field ploughed.

This list is not new information but is a summary of the sites discovered to date, on which there is information in The National Monument Record, Edinburgh. This can be added to both Frank Newall's and more recently Gordon McRae's gazetteer and summaries of the upstanding remains in Renfrewshire.

Obviously, given the right conditions, more crop mark sites will be discovered and although there are only a few in Renfrewshire there is the added advantage that we as a society can monitor these sites and prevent damage from development, which are after all part of the archaeological heritage of the County.

Furthermore noting when these sites have been ploughed and obtaining the local landowner's permission could lead to a programme of field walking in an attempt to recover artefacts from the plough soil that would perhaps help to date these sites. An initial survey of these sites was carried out by the author and Gordon McRae to establish the current state of land use and it was decided that a few would be worth walking.

Barochan Cross Fort Documentary sources

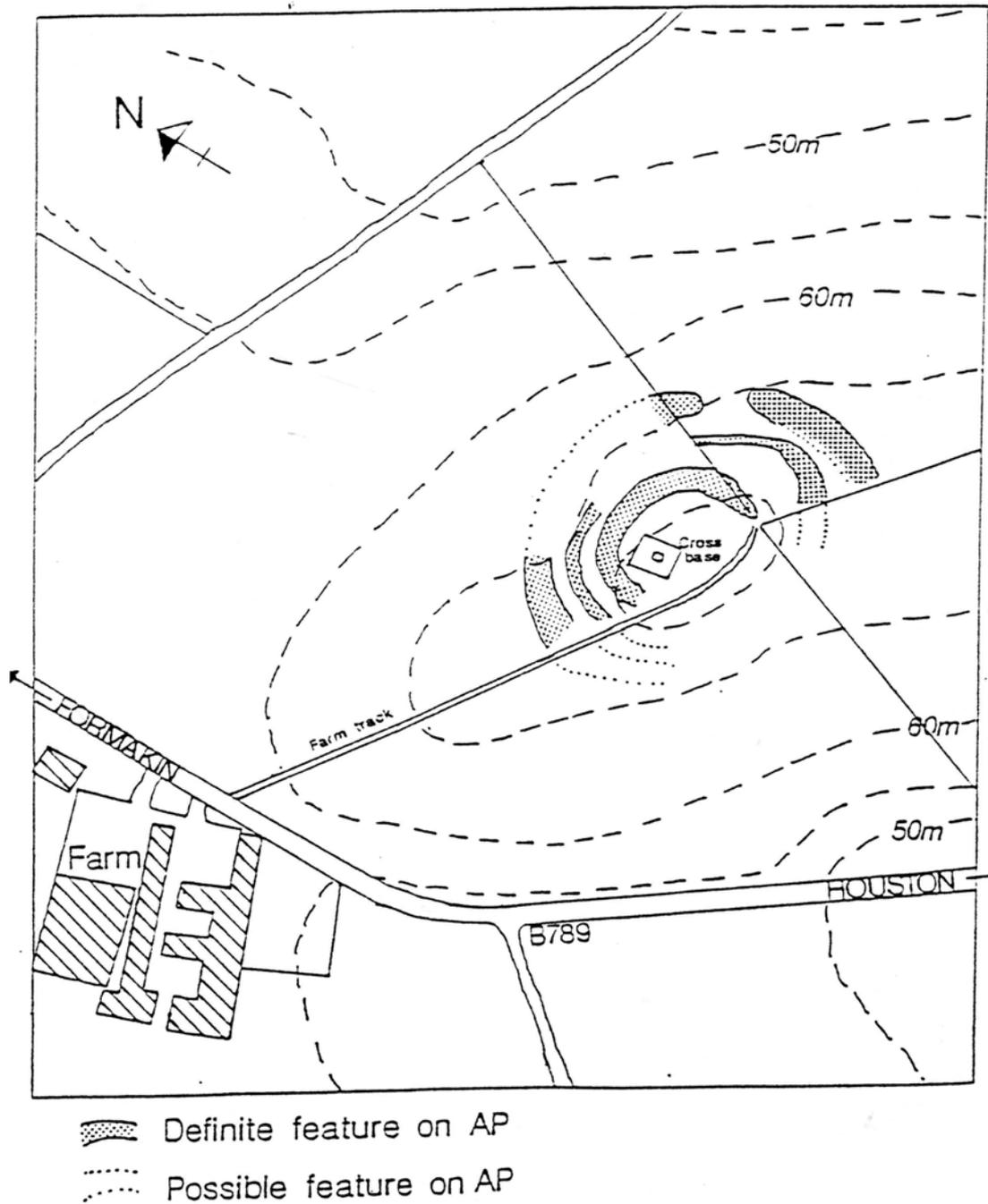
The National Monument Record entry states that an early description of Renfrewshire which mentions Barochan House states that the lands had belonged to the Flemings from the time of Robert the Bruce.

The Old Statistical Account for Scotland says that the mansion house which stood here was said to have been burnt down by the English, probably under King Edward.

The cross had been moved to the site from south of the Mill of Barochan during the late 19th century. The cross now stands within Paisley Abbey. The 1st edition OS map for the area states that the cross is "on the site of Barochan old House".

The Aerial Photograph

On the aerial photograph the Barochan Cross fort showed clearly as three, broken ditches around the summit of the hill. It is oval in shape and taking measurements from the photo it is approximately c.100m north-west to south-east and c.70m south-west to north-east.



2. The Crop Mark Fort at Barochan Cross

The inner ditch is penannular in shape surrounding the base of the cross and the area to the east. The southern side has been disturbed by the passage of the farm track.

The middle ditch is thinner and may merge with or overlap with the outer ditch on the northern side. It may be possible to see it continuing into the two fields to the south, as can the outer ditch.

The outer ditch can clearly be seen at the west and east ends of the site. Furthermore there appears to be a gap in the east end, just to the right of the field boundary on the illustration. No corresponding break can be seen in the narrower, more sharply defined middle ditch at this point. This coupled with the fact that the middle ditch may cut or be cut by the outer ditch suggests that this is a multiphase site, of at least two phases.

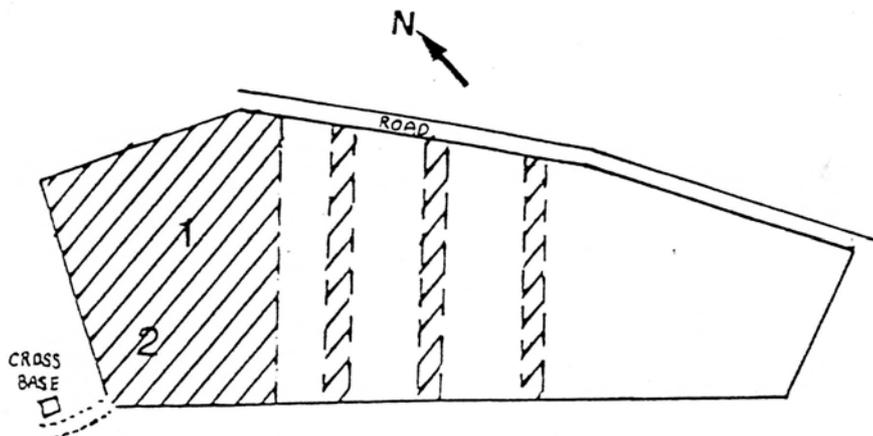
The similar form and size of the inner and outer ditches suggests that they may be contemporary. If this is the case then we may be looking at a small bivallate structure, possibly a homestead or a small fort of Iron Age date, similar to Knockmade, Renfrewshire or Knockjargon, Ayrshire.

The narrower middle ditch may either be of an earlier date or a later date perhaps early medieval, as suggested by the documentary evidence.

Field walking

The north-east field was ploughed during January 1992 and a small team walked this on a very wet and windy Saturday 29th February.

The outline of the field was drawn onto a planning board and strips 10 paces wide were paced out and marked with canes into strips or transects that ran south-west to north-east. Using the south-west corner of the field, that closest to the cross base, as the point of origin, the area up to the 80 pace cane was walked, with individual transects walked at the 100, 150 and 200 pace canes (see plan). The finds were recorded by transect number and their location along these judged by eye.

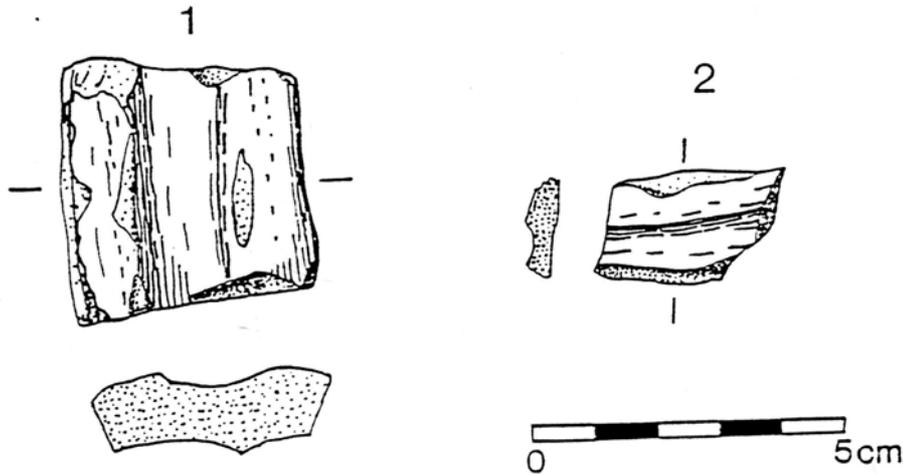


3. Plan of Areas Walked

Finds

Unfortunately very few finds of any great age were recovered. However two pieces of "green glaze" pottery, possibly dating to the 15th - 16th centuries were found. A number of clay pipe stems, a couple with markings were also found. These could date from the mid-17th century onwards. A large amount of Victorian and more modern porcelain was also present on the site but only a

few sherds were picked up. Sherds of stoneware and earthenware vessels were also recovered.



4. Medieval “Green Glaze” Pottery

The field contained lumps of burnt chert/flint some of which showed signs of working. These were extremely burnt and it is unlikely to have been due to stubble burning or other fires in the field, but as part of an industrial process such as in a lime kiln. Perhaps these were brought to the site by the farmer from a local lime kiln to spread on his fields, as is the most likely explanation for the presence of the pottery in the field, brought as manure, sometimes from the town. The start of such processes is unclear but it could be from medieval times onwards. Where the local limekilns are, needs examining to trace the source of the chert/flint.

Conclusion

Hopefully more field walking will be undertaken on this site, as well as others, over the following months. Unfortunately the lack of Iron Age pottery so far cannot advance our theory on the nature of the crop mark site at Barochan Cross, but it should be remembered that ‘absence of evidence is not evidence of absence’.

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