A Summary of PontArc Fieldwork 2017-2020

Now Done in Conjunction with Members of CRAG(Y) – the Cropmark Research Archaeology Group (Yorkshire)

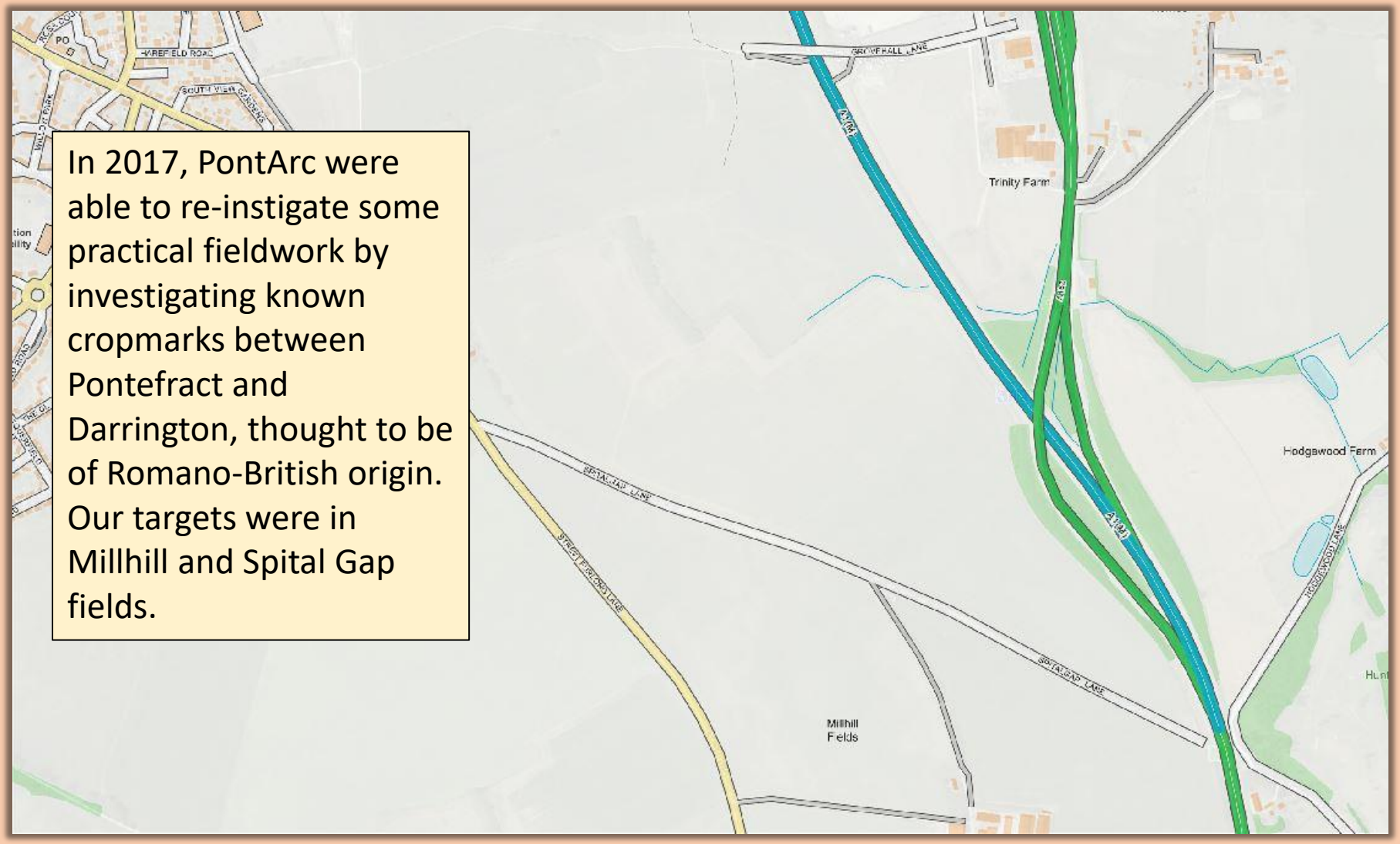
Investigations of Romano-British Cropmarks at Darrington

Phil Jones

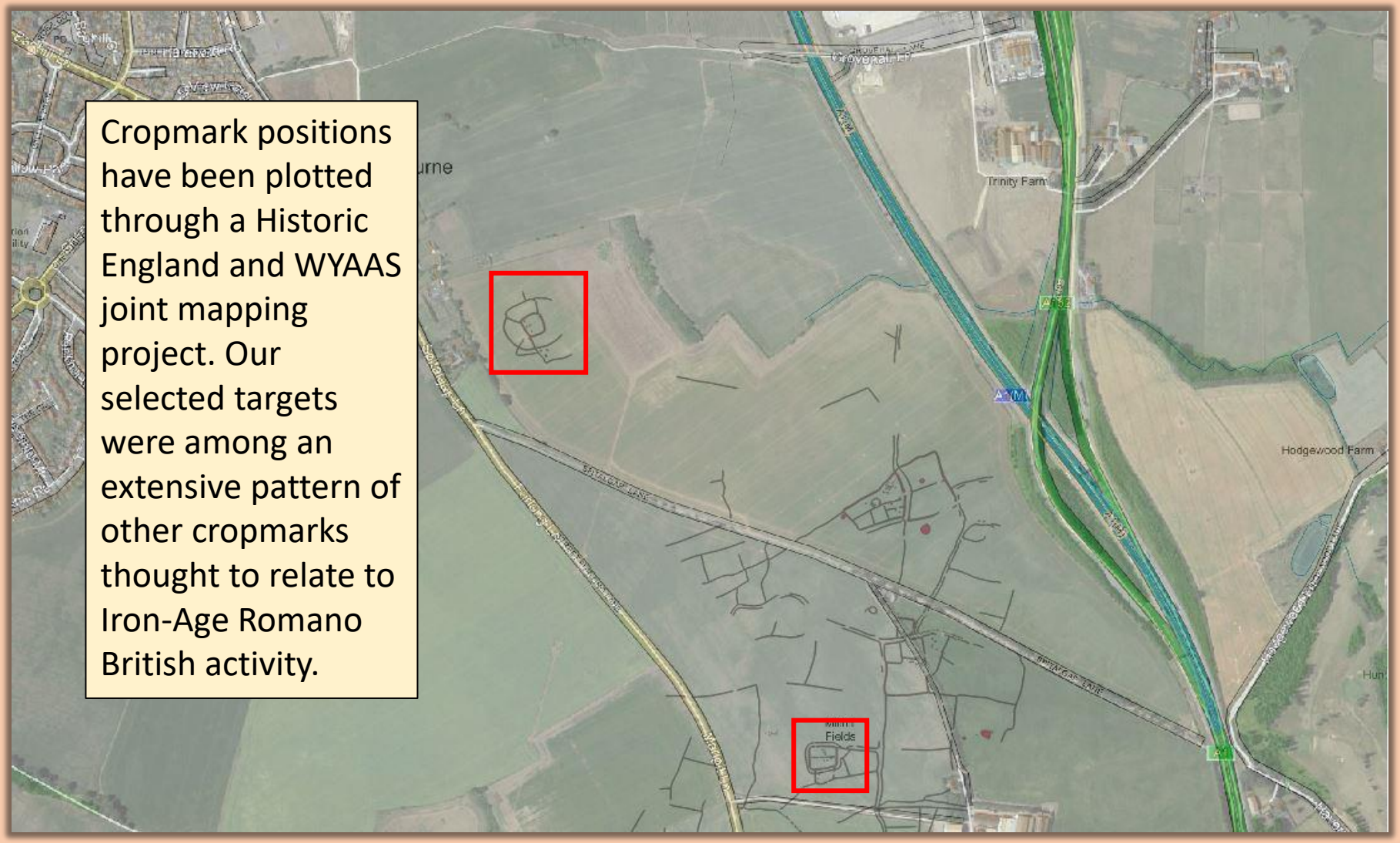
PontArc Field Director

June 2020

Targets at Darrington - Location

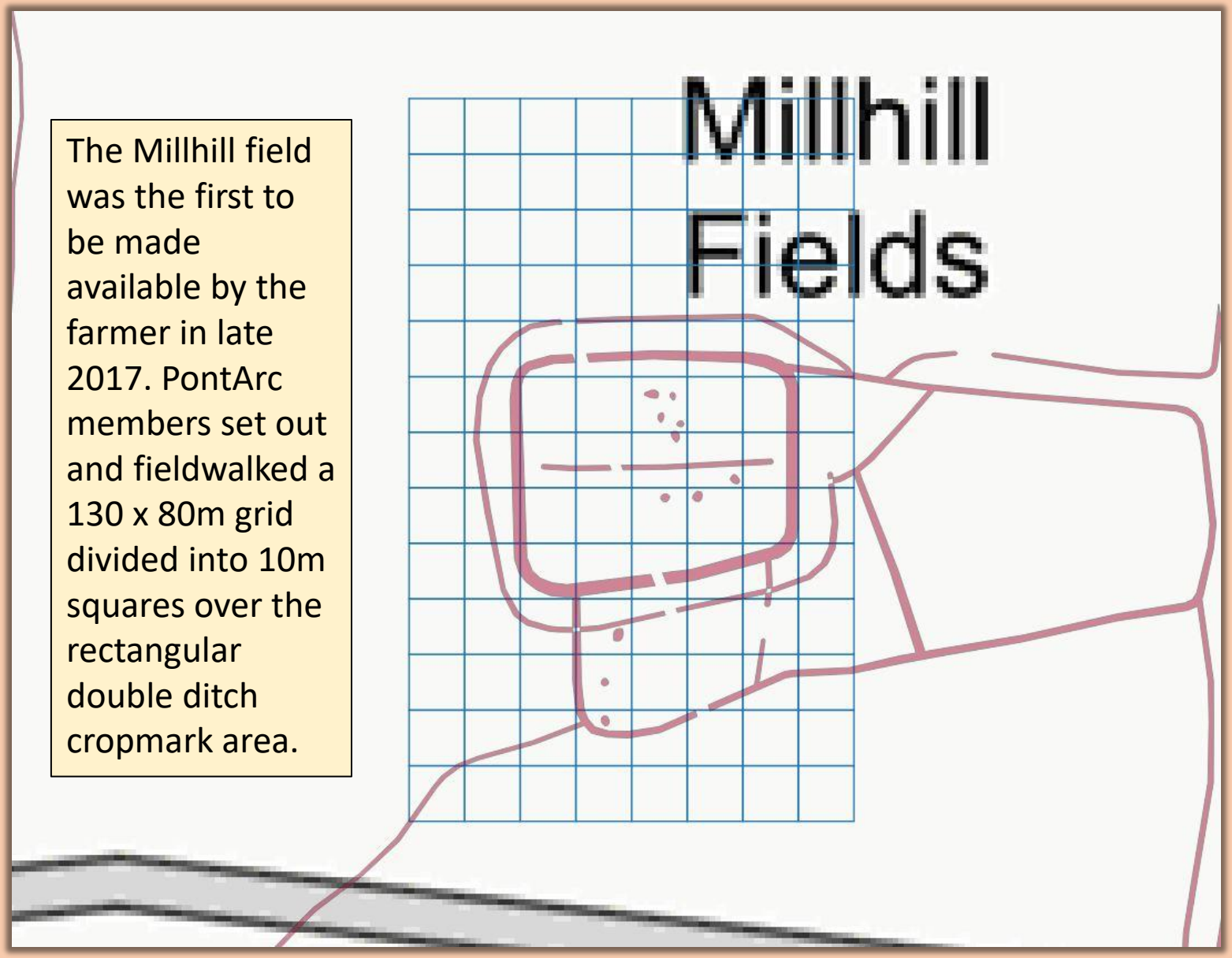


Targets at Darrington – Crop Marks & Google Earth



Targets at Darrington – Crop Marks & Lidar

Millhill Fieldwalking – Oct/Nov 2017



The Millhill field was the first to be made available by the farmer in late 2017. PontArc members set out and fieldwalked a 130 x 80m grid divided into 10m squares over the rectangular double ditch cropmark area.

Millhill Fieldwalking – Example Finds

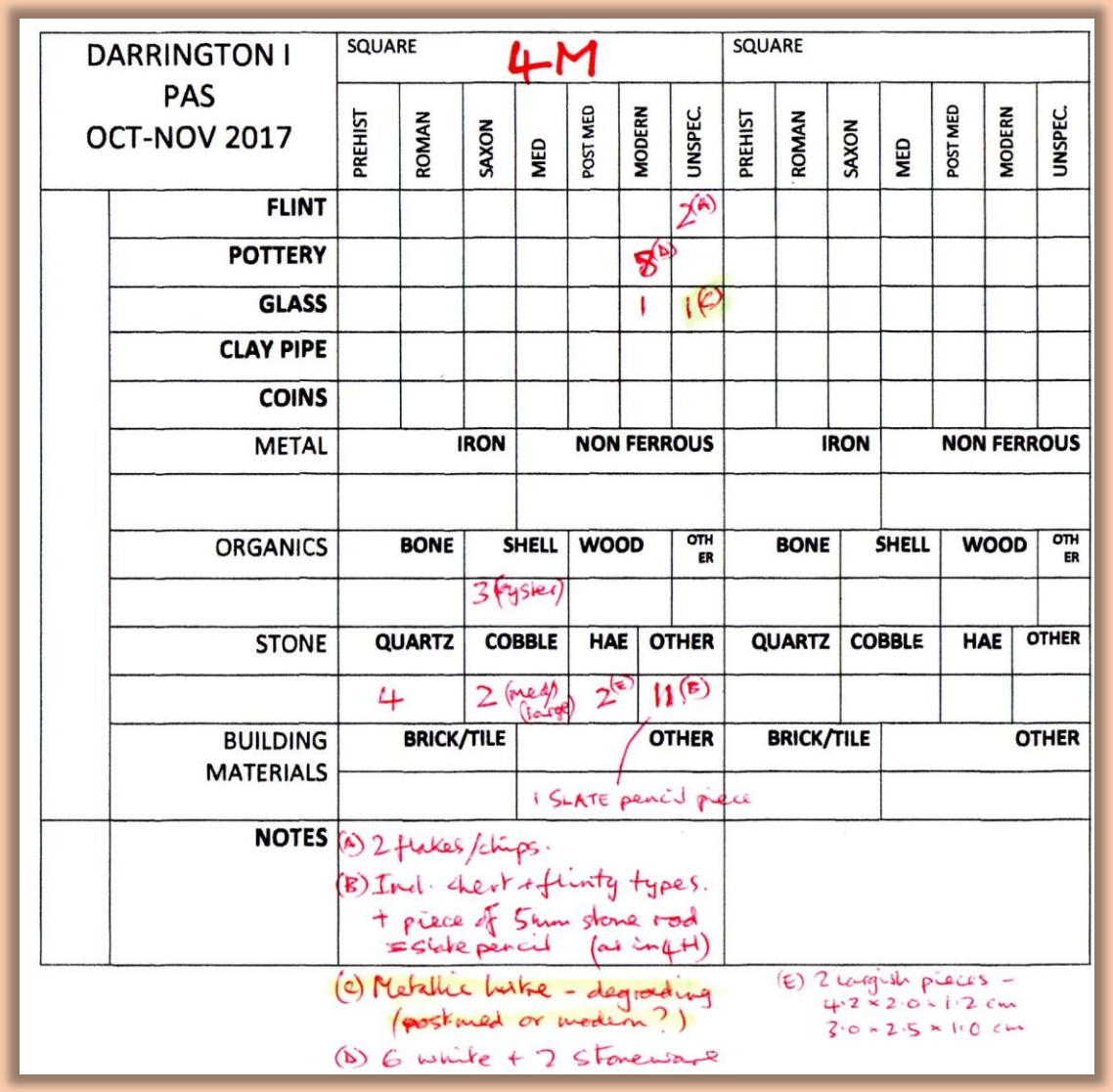
Random sample of surface finds lying outside and to the south of the targeted area, near the field boundary.

Material seems to have accumulated in this area due to the fall in the slope of the ground and plough turning.

Night-soiling of the field is also indicated.

Millhill Fieldwalking Finds

- Finds were first divided into geological and non-geological items for each 10m square. Where stone had been burnt, worked or otherwise human-influenced, this was noted. Pieces of quartz, haematite, flint and cobbles can be indicators of human activity, so these were counted separately.
- The non-geological items were then split into pottery and non-pottery finds for each square.
- All items were categorised, counted and recorded on forms like the one opposite, for square 4M…



DARRINGTON I
PAS
OCT-NOV 2017

SQUARE 4M

	PREHIST	ROMAN	SAXON	MED	POST MED	MODERN	UNSPEC.
FLINT							2(A)
POTTERY						8(B)	
GLASS						1	1(C)
CLAY PIPE							
COINS							

METAL	IRON	NON FERROUS

ORGANICS	BONE	SHELL	WOOD	OTHER
		3 (oyster)		

STONE	QUARTZ	COBBLE	HAE	OTHER
	4	2 (med/large)	2(E)	11(E)

BUILDING MATERIALS	BRICK/TILE	OTHER
		1 SLATE pencil piece

NOTES
(A) 2 flakes/chips.
(B) Incl. chert + flinty types. + piece of 5mm stone rod = slate pencil (as in 4H)
(C) Metallic lustre - degrading (post-med or modern?)
(D) 6 white + 2 stoneware
(E) 2 largish pieces - 4·2 × 2·0 × 1·2 cm, 3·0 × 2·5 × 1·0 cm

SQUARE

	PREHIST	ROMAN	SAXON	MED	POST MED	MODERN	UNSPEC.
FLINT							
POTTERY							
GLASS							
CLAY PIPE							
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METAL	IRON	NON FERROUS

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STONE	QUARTZ	COBBLE	HAE	OTHER

BUILDING MATERIALS	BRICK/TILE	OTHER

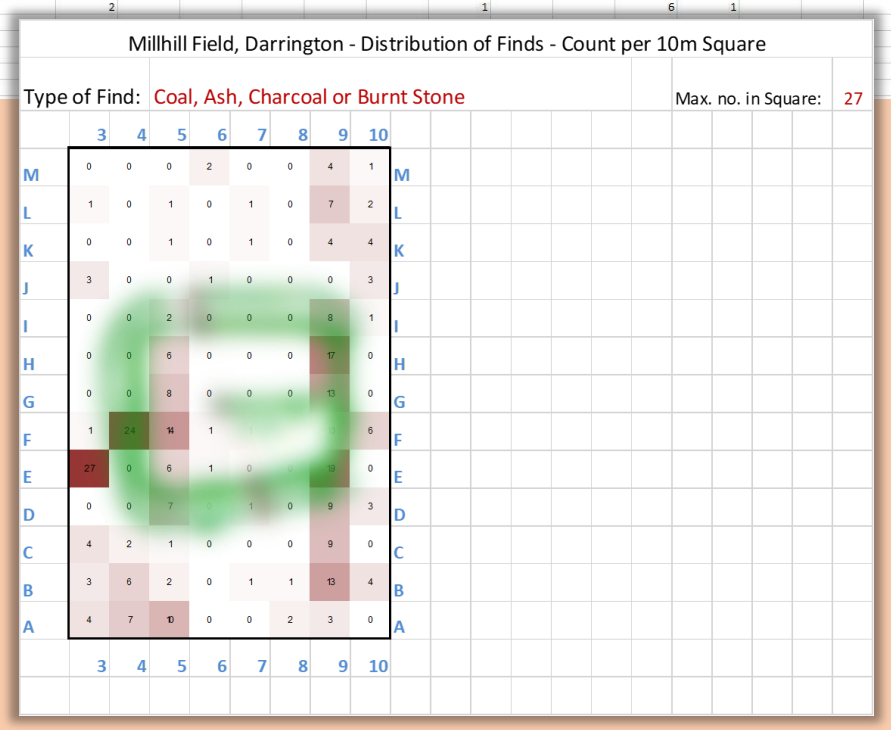
Millhill Fieldwalking Finds

All the data from the recording forms were entered into a spreadsheet, and this was used to grid-plot the counts of finds by type. (The darker the brown, the higher the count. Green shows the cropmark position).

Without involving specialists, dating categories were kept broad to allow confident recording. We have taken:

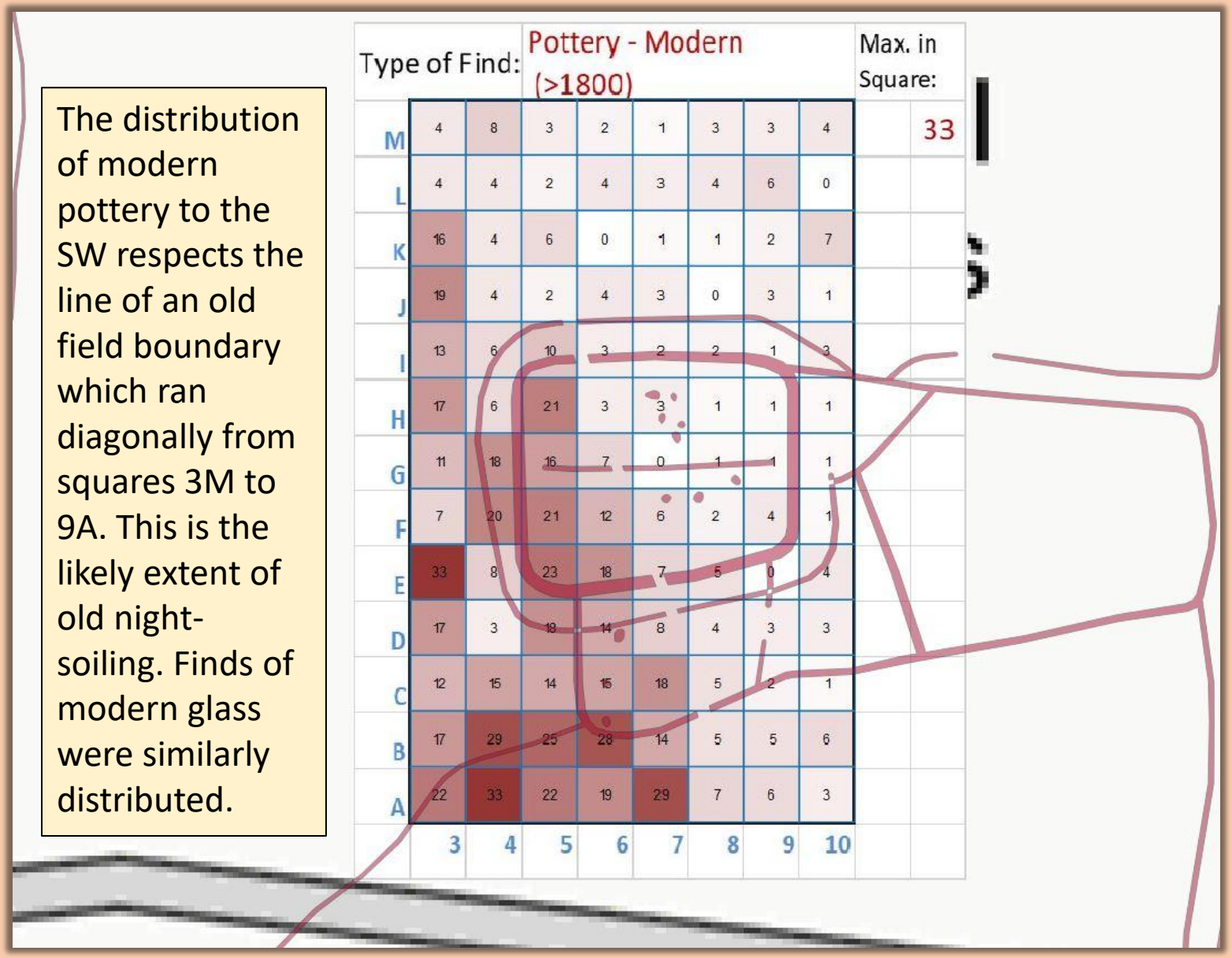
“Modern” as 1800 or later
“Post-Medieval” as 1500 – 1800
“Medieval or Earlier” is pre-1500

Type of Find:	Quartz	Cobbles (or fragments)	Haematite	Coal, Ash, Charcoal or Burnt Stone	Shell, Bone or Tooth	Ferrous Metal or Slag	Non-ferrous Metal	Worked Flint	Coins	Clay Pipe	Glass - Modern (>1800)	Glass - Post Medieval (1500-1800)	Glass - Medieval or earlier (<1500)	Pottery - Modern (>1800)	Pottery - Post medieval (1500-1800)	Pottery - Medieval or earlier (<1500)	Ceramic Building Material	Misc
10m Square Ref.	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count	Count
3A	4	4	1	4	29						5			22				
3B	13	4	3	3	16			1			4			17	1			
3C	23	6	4	4	10					1	2			12		1		1
3D	5				1			1		1	1			17		1		
3E	28	19	15	27	18					3	3			33	4	3	1	
3F	10	3	1	1										7			1	
3G	12	1	2		7						2			11				
3H	11	2	1		8						1			17	2			
3I	2				4					1	1			13	2			
3J	26	4	2	3	25					1	4	2		19	2	1		2
3K	32		7		24			1		2	4			16		1		
3L	17	4	6	1	3					2				4	2	1		2
3M	1				6	1					2			4				
4A	15	5	7	7	10					1	11			33	3	3		
4B	14	4	11	6	16		1	1		1				29	1	5		1
4C	8	1	3	2	2					1	8			15	1	2		1
4D					3					2				3	1			
4E	5	1	2		2					1	1			8		1		2
4F	22	7	10	24	10					1	9			20	2	1	2	2
4G	6		1		6			1		1	6			18	1	1	1	
4H					2						1			6	1			2
4I	5																	1
4J	1																	1
4K	10	1																1
4L	2	5																1
4M	4	2	2															1



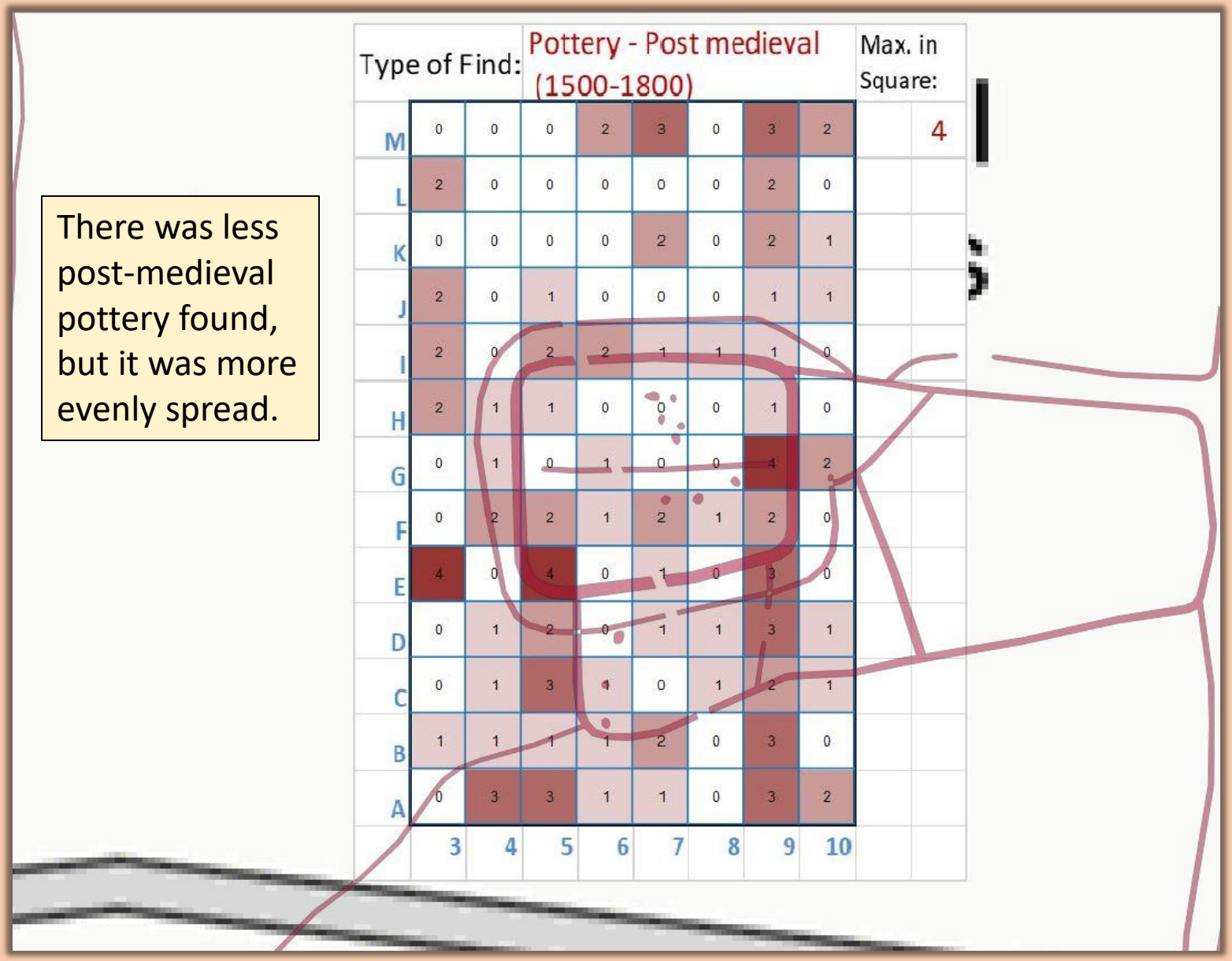
Millhill Fieldwalking – Modern Pottery Finds

The distribution of modern pottery to the SW respects the line of an old field boundary which ran diagonally from squares 3M to 9A. This is the likely extent of old night-soiling. Finds of modern glass were similarly distributed.



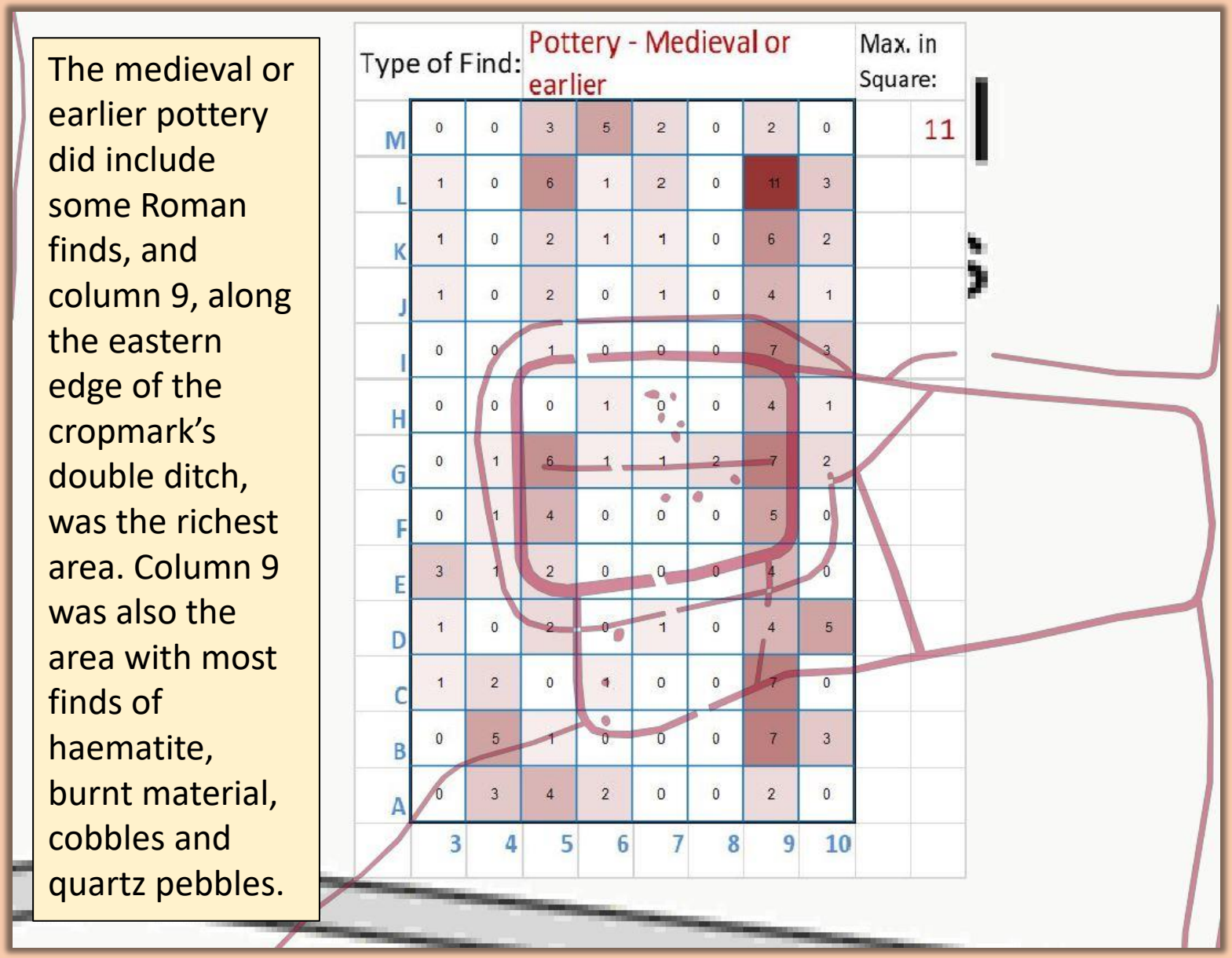
Millhill Fieldwalking – Post-Medieval Pottery Finds

There was less post-medieval pottery found, but it was more evenly spread.



Millhill Fieldwalking – Early Pottery Finds

The medieval or earlier pottery did include some Roman finds, and column 9, along the eastern edge of the cropmark's double ditch, was the richest area. Column 9 was also the area with most finds of haematite, burnt material, cobbles and quartz pebbles.



Millhill Fieldwalking - Roman Pottery Examples

Pieces of Roman greyware.

Pieces of Roman black burnished ware and Nene Valley/Southern Rhineland black slipware with barbotine decoration.

Millhill Fieldwalking - Roman Glass Examples

A couple of tiny, thin and bubbly Roman glass fragments, apparently from the necks of small bottles.

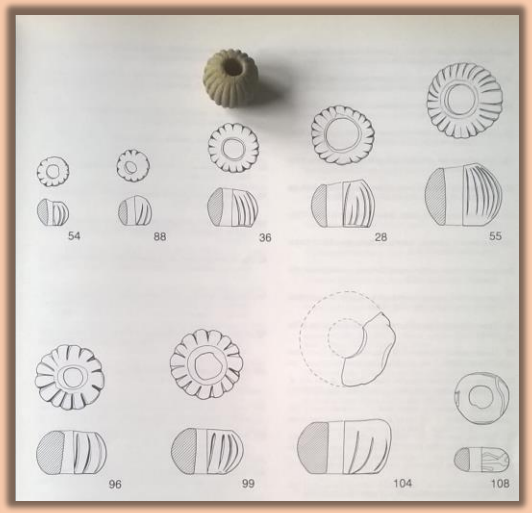
Well found!

Millhill Fieldwalking - Star Find

A Roman “Melon Bead”, found in square 7A, made of turquoise faience or “frit”, with 20 ridges.

Dates from 1st – 2nd Century AD.

Reference examples found in Castleford and a few elsewhere in Yorkshire.

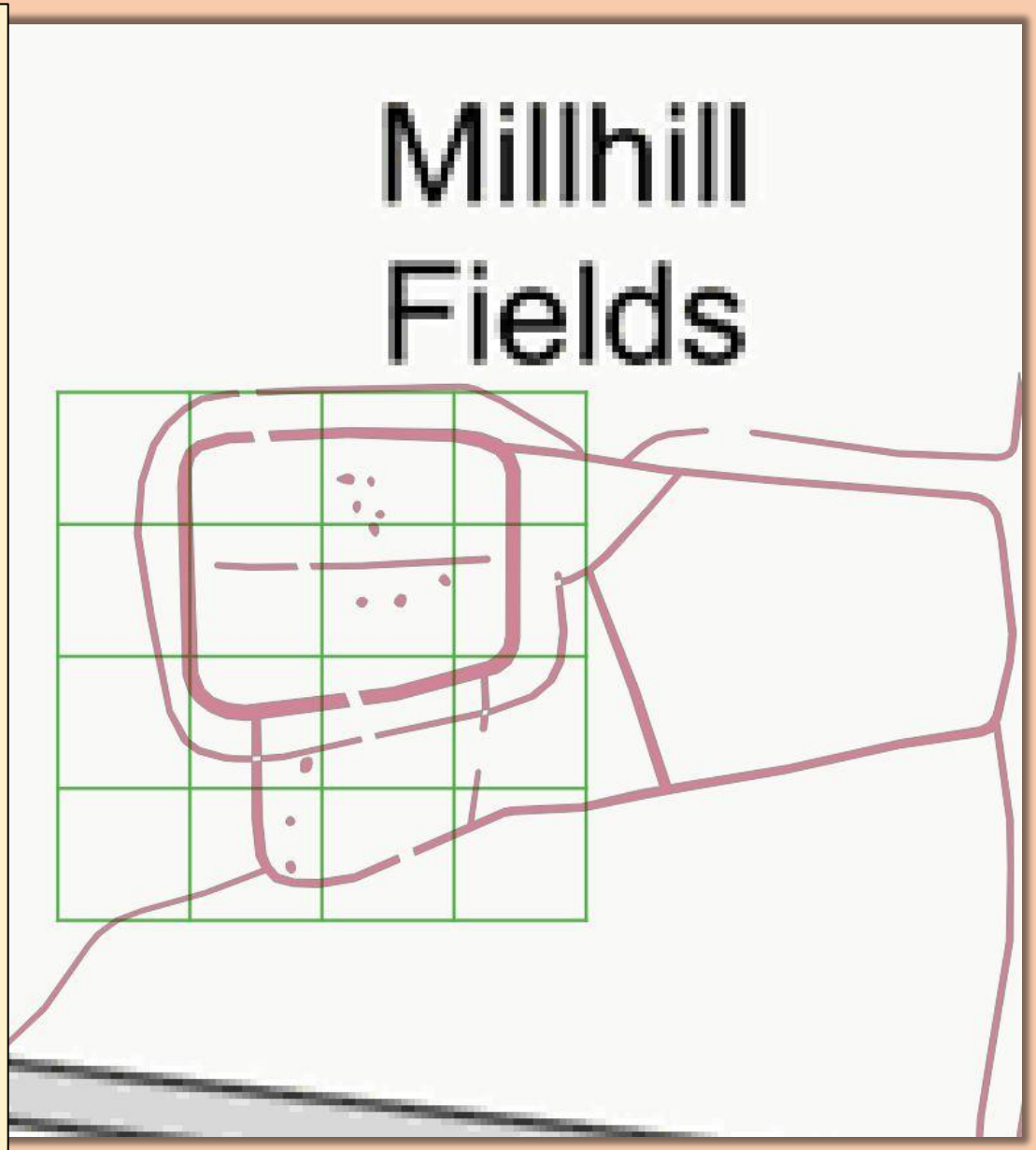


Millhill Geophysics – Resistivity Survey August 2018

CRAG(Y) first met in July 2018 with Ian Sanderson (WYAAS) as chairman. CRAG(Y) was set up to investigate local cropmarks at risk of damage by farming.

PJ was at the meeting and outlined PontArc's fieldwork on the Millhill cropmark. It was decided that further work there would be ideal pilot teamwork for CRAG(Y).

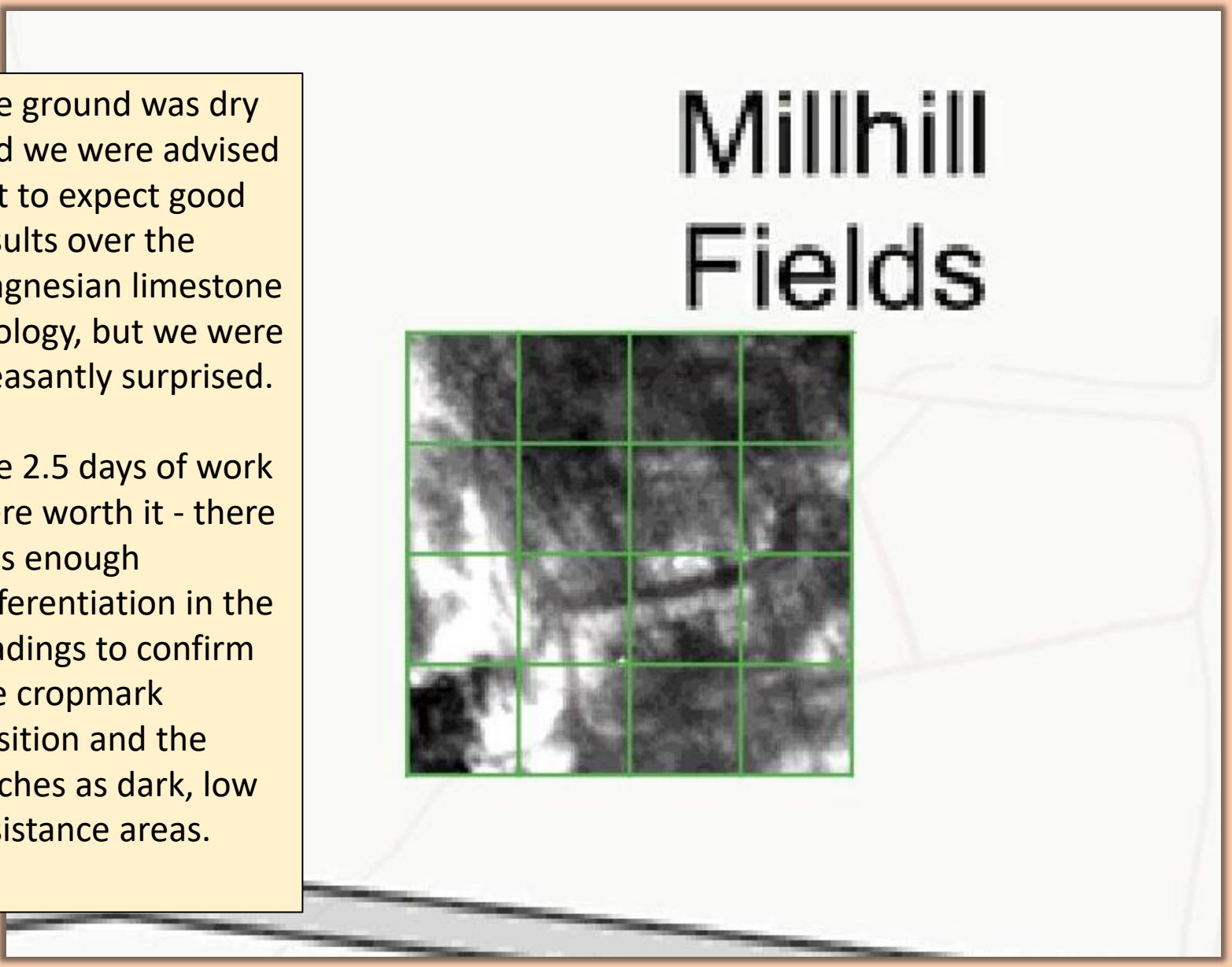
The field became accessible in August 2018, and members of PontArc and South Leeds Archaeology did an earth resistance survey over the main cropmark in 16 x 20m squares.



Millhill Geophysics – Resistivity Survey August 2018

The ground was dry and we were advised not to expect good results over the magnesian limestone geology, but we were pleasantly surprised.

The 2.5 days of work were worth it - there was enough differentiation in the readings to confirm the cropmark position and the ditches as dark, low resistance areas.

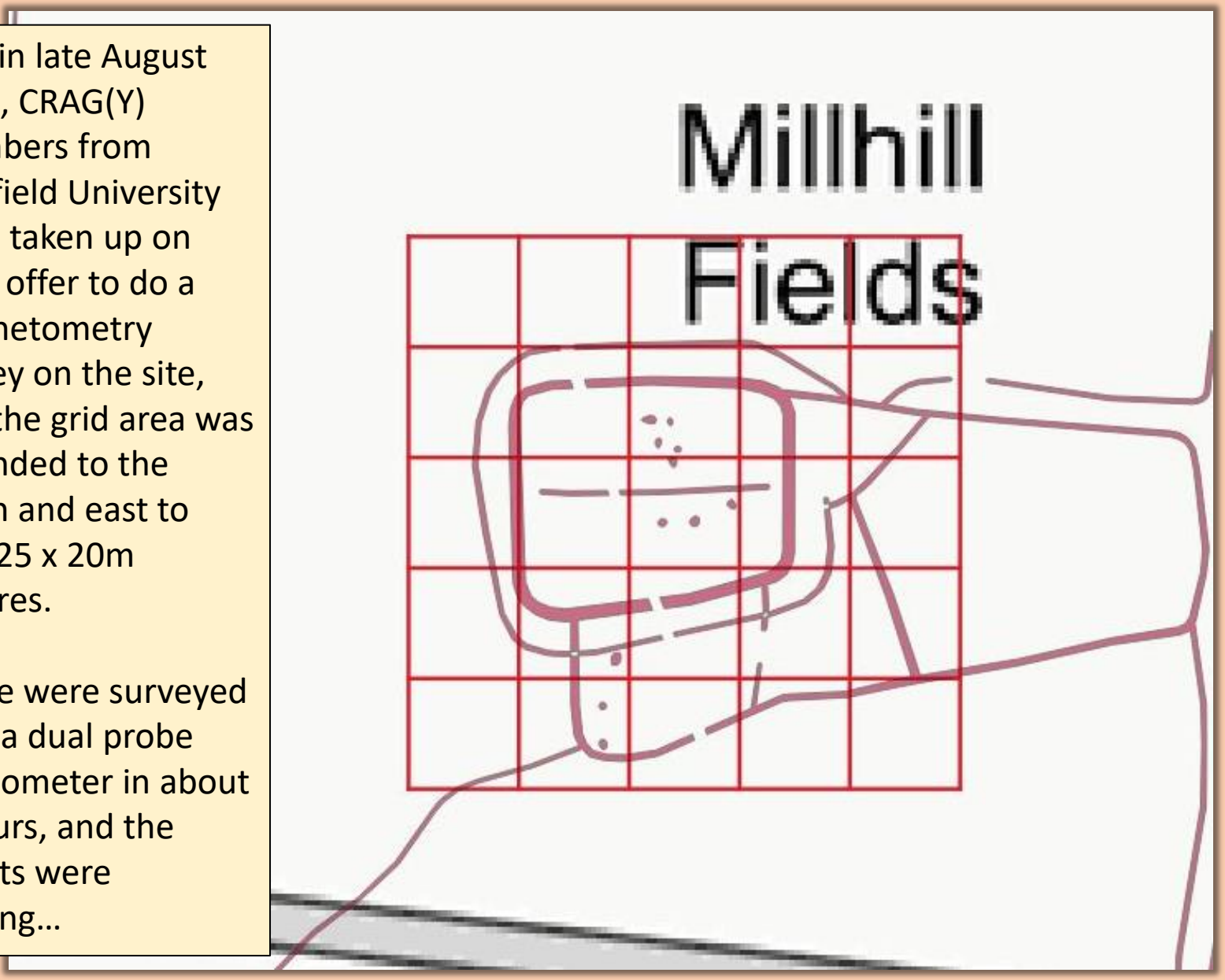


Millhill Geophysics – Resistivity Survey August 2018

Millhill Geophysics – Magnetometry Survey Aug. 2018

Also in late August 2018, CRAG(Y) members from Sheffield University were taken up on their offer to do a magnetometry survey on the site, and the grid area was extended to the north and east to give 25 x 20m squares.

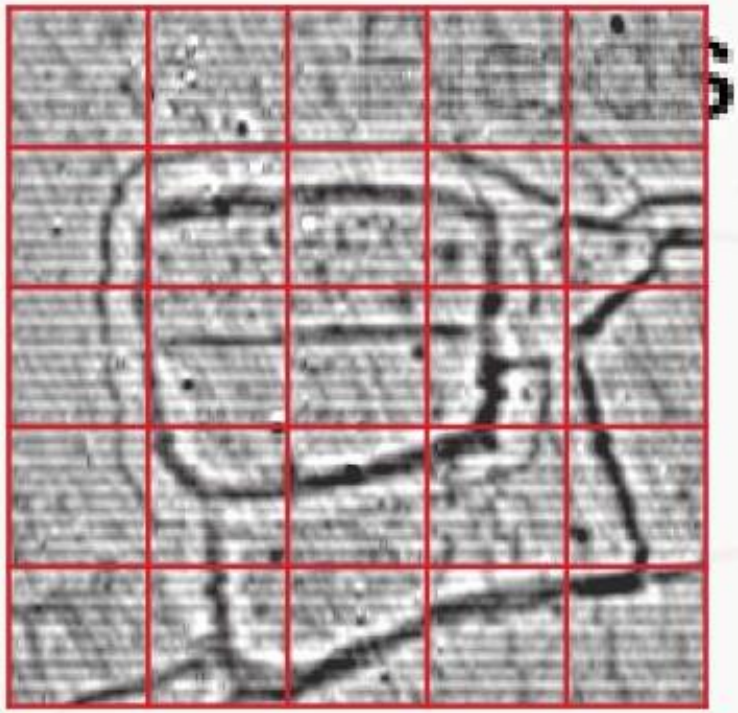
These were surveyed with a dual probe gradiometer in about 2 hours, and the results were striking…



Millhill Geophysics – Magnetometry Survey Aug. 2018

There was good agreement between the results and plotted cropmarks, right down to the position of one or two interesting looking pits.

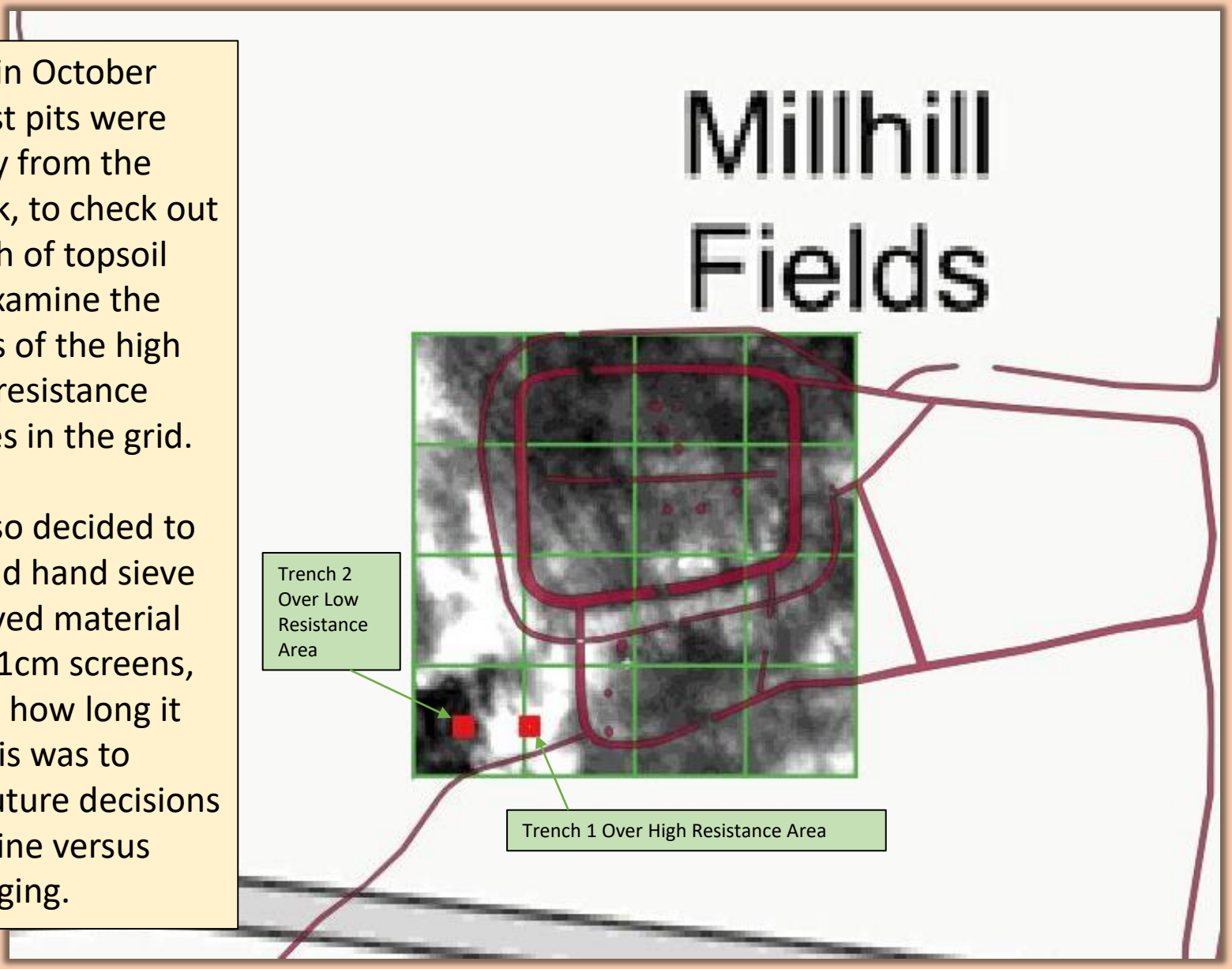
Although there are several potentially exciting targets, excavations of the cropmark have been put on hold until funding is in place to deal with finds analysis and other post excavation work.



Millhill Test Pits – October 2018

Instead, in October 2018, test pits were dug away from the cropmark, to check out the depth of topsoil and to examine the extremes of the high and low resistance responses in the grid.

It was also decided to weigh and hand sieve all removed material through 1cm screens, and time how long it took. This was to inform future decisions on machine versus hand digging.



Millhill Test Pits – October 2018

Trench 1 (High Resistance Area)

- A 2m square area was opened to a depth of 15cm, but then a smaller sondage was worked in the SE corner.
- Found one layer of well mixed topsoil, to a depth of 35cm, on top of solid limestone.
- Some patches of yellow and red-brown material were at the interface between topsoil and limestone.
- Most types of the fieldwalking finds were excavated, but not in any stratification.

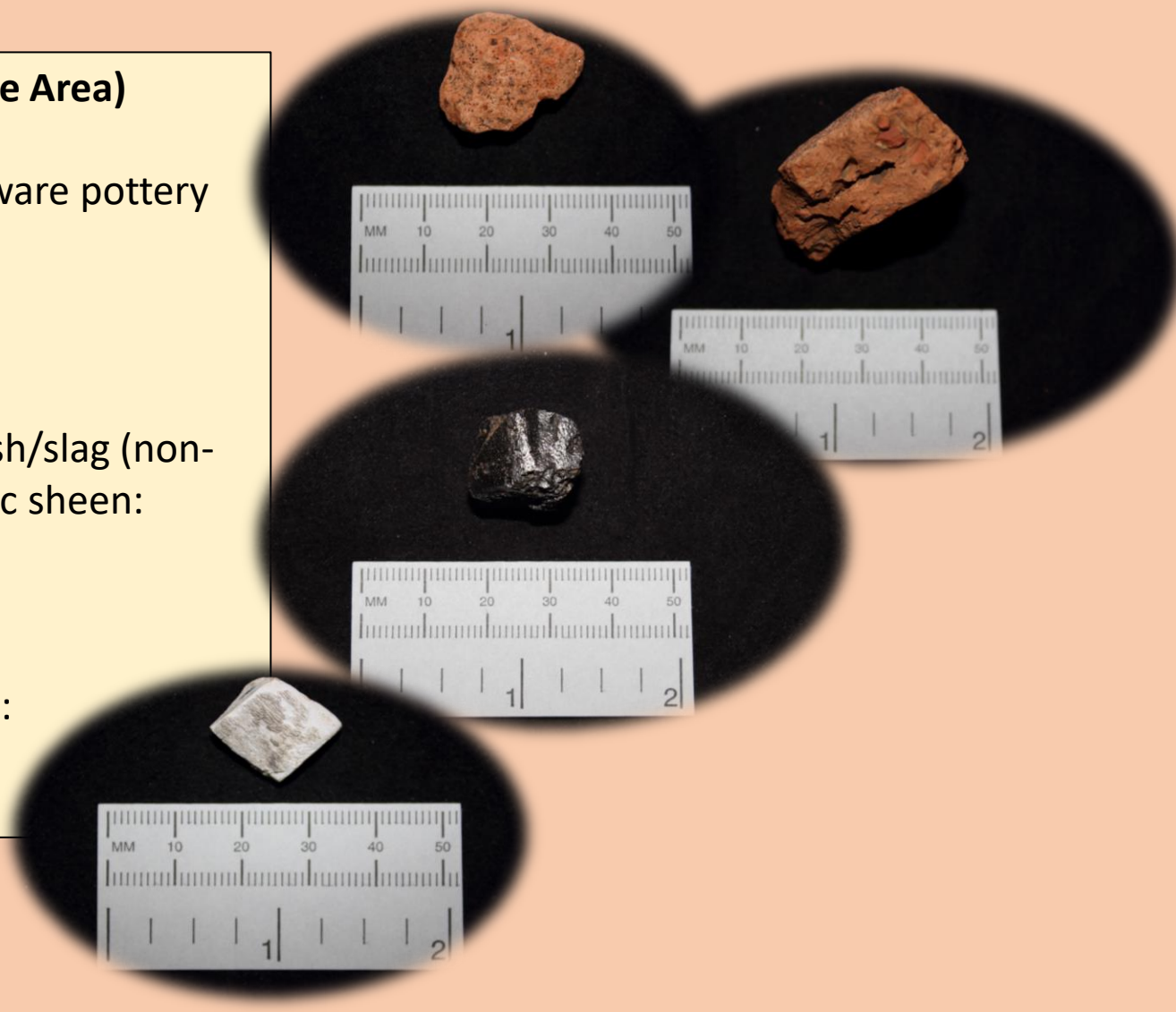
Millhill Test Pits – October 2018

Trench 1 (High Resistance Area)

- 2 possible Roman redware pottery sherds:

- Piece of low density ash/slag (non-magnetic) with metallic sheen:

- Piece of horn or antler:



Millhill Test Pits – October 2018

Trench 2 (Low Resistance Area)

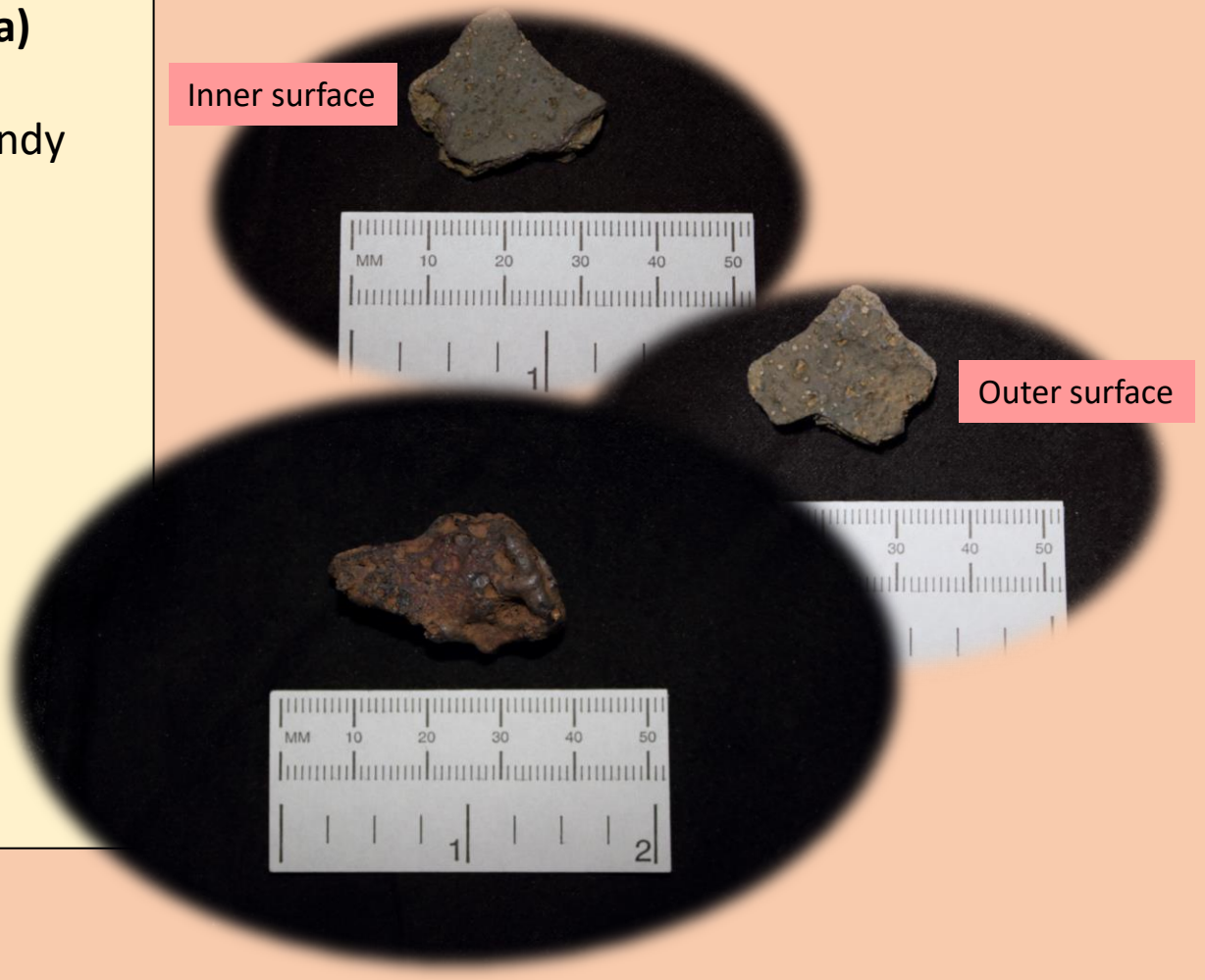
- A 1m square was opened in the SE corner of the 2m square area set out, and then a smaller sondage was worked in the SE corner of that.
- Found one layer of well mixed topsoil, to a depth of 25cm, and a further layer of red-brown subsoil with many limestone fragments, to a depth of 20cm.
- Soft, moisture-retentive, yellow-beige limestone marl found at a depth of 45cm.
- Evidence of a feature/depression running NW-SE. No cut is visible in the subsoil section, but there is an edge in the northern section of the marl.
- Most types of fieldwalking finds were excavated, but not in any stratification.

Millhill Test Pits – October 2018

Trench 2 (Low Resistance Area)

- 1 possible Roman coarse sandy greyware pottery sherd:

- Piece of dense slag (weakly magnetic):

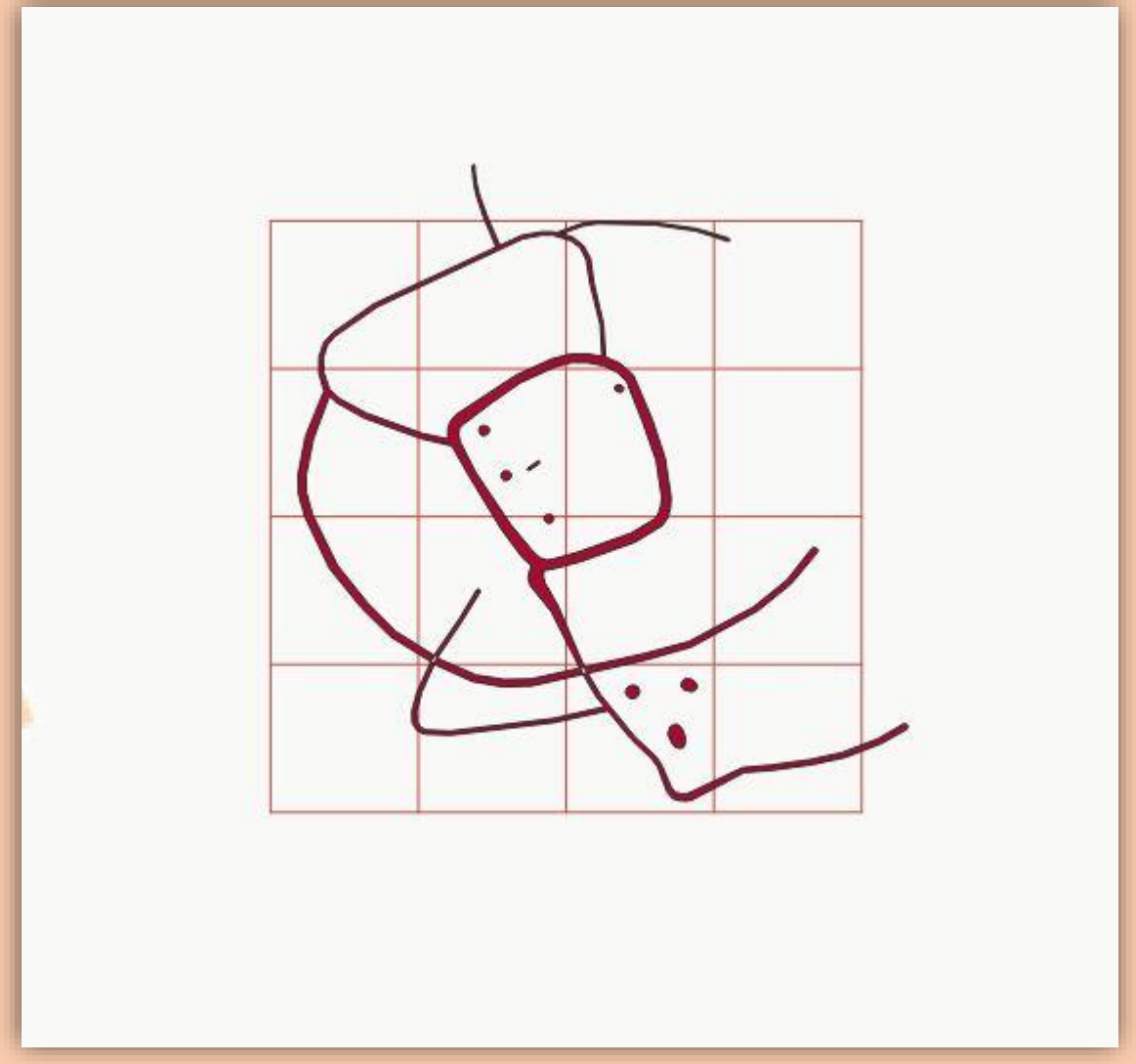


Millhill Test Pits - October 2018

Spital Gap Geophysics - September 2019

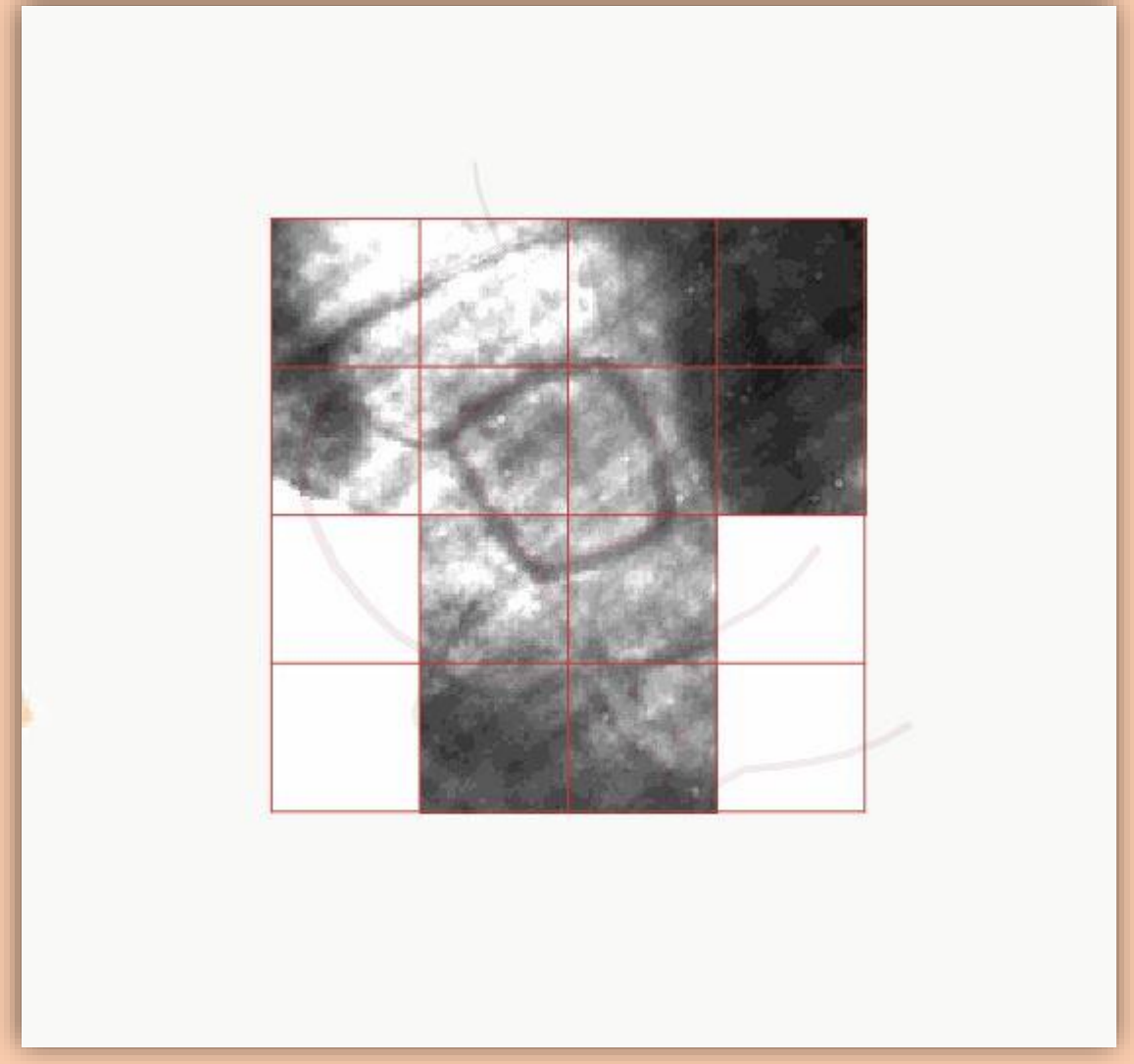
After harvesting in September 2019, Spital Gap field became available to us for geophysics.

Again in support of the CRAG(Y) initiative, PontArc and SLA members surveyed and set out a grid of 16 x 30m squares over the main cropmark area.



Spital Gap Geophysics – Resistivity - September 2019

An earth resistance survey of 12 x 30m squares was carried out over four days. A communication problem meant we lost two SW squares to ploughing. Time constraints led us to decide that two SE squares were less important than the rest. Although the ground was noticeably damp to the east, the cropmark ditches showed up well again as dark, low resistance areas.



Spital Gap Geophysics – Magnetometry – Sept. 2019

CRAG(Y) member Mike Haken of the Roman Roads Research Association, kindly offered to carry out a magnetometry survey on the site, and this was arranged for 7/9/2019. Mike brought his wheeled, 4-probe, GPS enabled gradiometer array, and with some assistance from 2 - 3 PontArc and SLA members, surveyed a large area in just a day. Despite the difficult ground, the results were impressive.

Spital Gap – Surface Finds – Sept. 2019

Though no true systematic fieldwalking was done, a couple of interesting surface finds were made whilst carrying out the geophysics and looking down at the ground a lot!

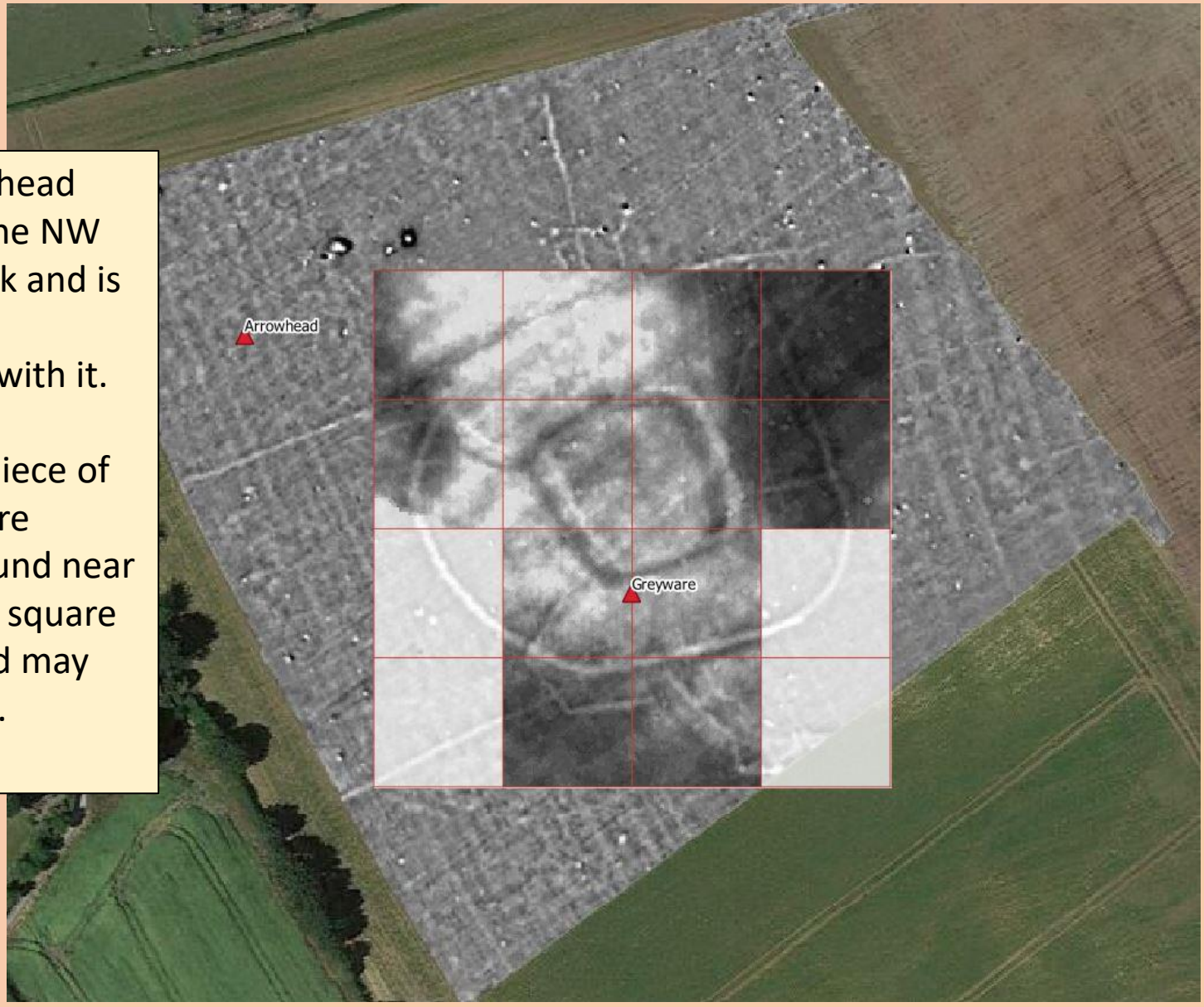
A fine example of a barbed and tanged flint arrowhead, probably late Neolithic or Bronze Age:

A piece of Roman greyware pottery with a good rim profile:

Spital Gap Surface Finds – Sept. 2019

The flint arrowhead was found to the NW of the cropmark and is unlikely to be contemporary with it.

However, the piece of Roman greyware pottery was found near the cropmark's square inner ditch, and may well be related.

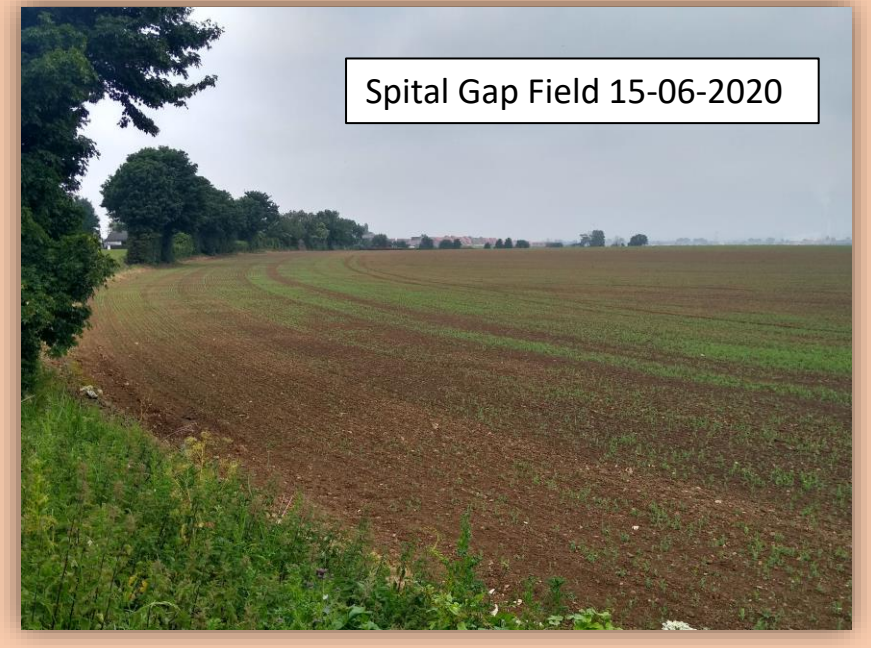


Darrington - Next Steps

After Spital Gap field was ploughed and harrowed, wet weather in late 2019 delayed new crops being drilled/sown successfully, and we were unable to do systematic fieldwalking. That will be the next stage of work here. The field has been recently re-drilled and the current crop is just coming through.

Excavation is next in order for Millhill field, and CRAG(Y) has begun to gain some funds which might assist with post excavation analysis. The field has a cereal crop at the moment, so a window of opportunity may open in September 2020.

Once current coronavirus lockdown restrictions have been eased, it is hoped to make some firmer plans…


Spital Gap Field 15-06-2020


Millhill Field 15-06-2020