Chichester and District Archaeology Society

Geophysical Survey

Petworth Sports Field – October 2019

Steve Cleverly, Trevor Davies and Mike Kallaway

Figure 1. *The Cricket Lodge*

1. Summary

At the request of The National Trust and the Petworth Sports Club, the Chichester and District Archaeology Society (CDAS) carried out magnetometry and resistivity surveys of the Sports Field (Figure 1). The surveys identified trackways and the kennels shown on the 1838 Tithe and other maps (Figure 5).

Although there are archaeological features running under the football pitches and the outfield of the cricket pitch, no archaeology was detected in the area surrounding the cricket square.

Background

The Sports Club at Petworth is planning to upgrade the sports field and were keen to understand what the potential archaeological remains were under the pitches.

2. Site Access/ Health and Safety

The Health and Safety Risk Assessment (Appendix 1) was prepared prior to undertaking the survey.

3. Method

These surveys utilised the following equipment:

1. Geoscan RM15 D Resistivity meter serial number 4425 that CDAS was able to purchase as a result of generous donations for this purpose from the Chichester District Council Coastal Pathfinder Project and the Chichester City Council.
2. Geoscan RM15 D Resistivity meter serial number 4328 acquired on long term loan from the Chichester District Council at the conclusion of the City Walls project.
3. Geoscan FM256 magnetometer. Previously purchased by CDAS as the result of a generous grant from the Chichester Harbour Conservancy.

The grid was established using the southern touchline of the main football pitch as the base line. The grid squares were set up using a point 7 metres south of the touchline and 7 metres east of the eastern goal line. The grid was then established using tapes to measure the sides and diagonals of the squares.

5. Volunteer Participation

CDAS members worked on the survey during 14th to 18th of October 2018. 21 CDAS members participated in the survey and provided a total of 54 man days of effort.

6. Survey results

The aim of the survey was to survey with resistivity the whole field and in addition to survey the most archaeologically critical areas with magnetometry.

The survey was conducted during a particularly wet week in October and we struggled to exploit the windows in the weather. As a result, not all the sports field was surveyed with resistivity. Partial squares around the northern and western peripheries have been omitted. There is no indication that there is any significant archaeology in these squares.

The area around the kennels was also surveyed using magnetometry. Problems with the equipment and with the weather meant that the original plan to extend the magnetometry survey to the area around the Turkey Lodge (Figure 5).was not possible.

Figure 2. *Results of Magnetometry Survey*

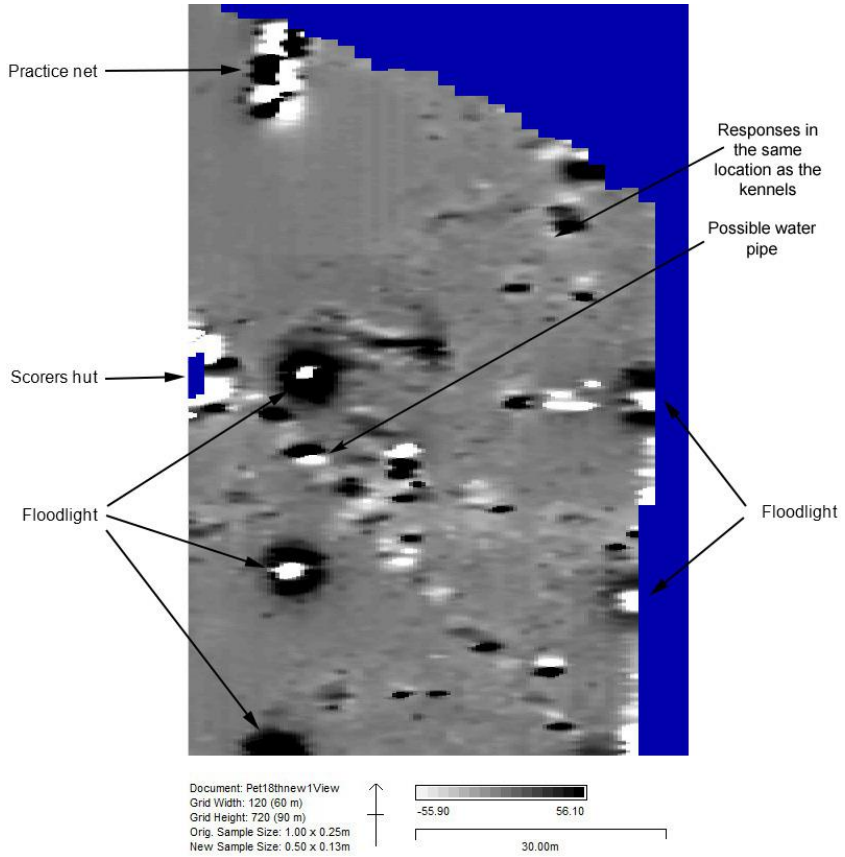


Figure 2 shows the results from the magnetometry survey. The key features are:

- There are a group of four intense magnetic responses in the same area as the kennels. It is not possible to determine the exact cause.
- The responses from the floodlights. The columns are steel, so a strong response is expected.
- The scorer's hut has some metallic content.
- By coincidence, the scorer's hut sits on top of a metal water pipe that can also be seen on the resistivity plot as a direct continuation (Figures 3 and 4).
- The area of the practice nets shows a clear response.

Figure 3. *Annotated Resistivity results.*

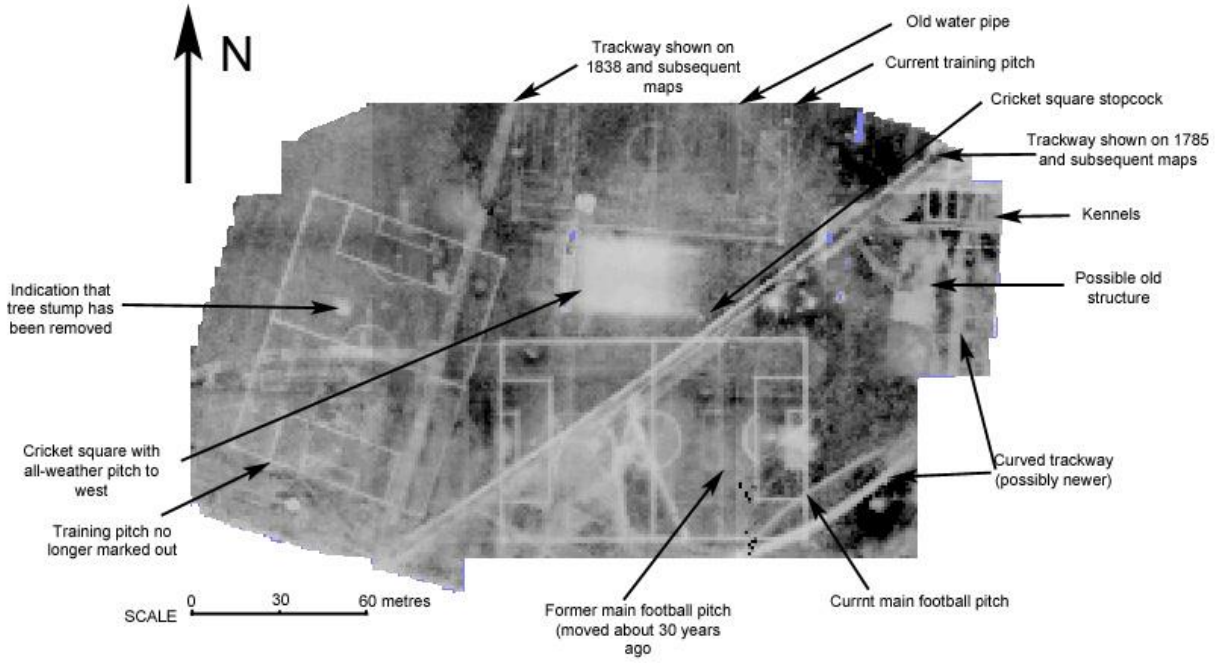


Figure 3 shows the plot from the resistivity survey. The key features are:

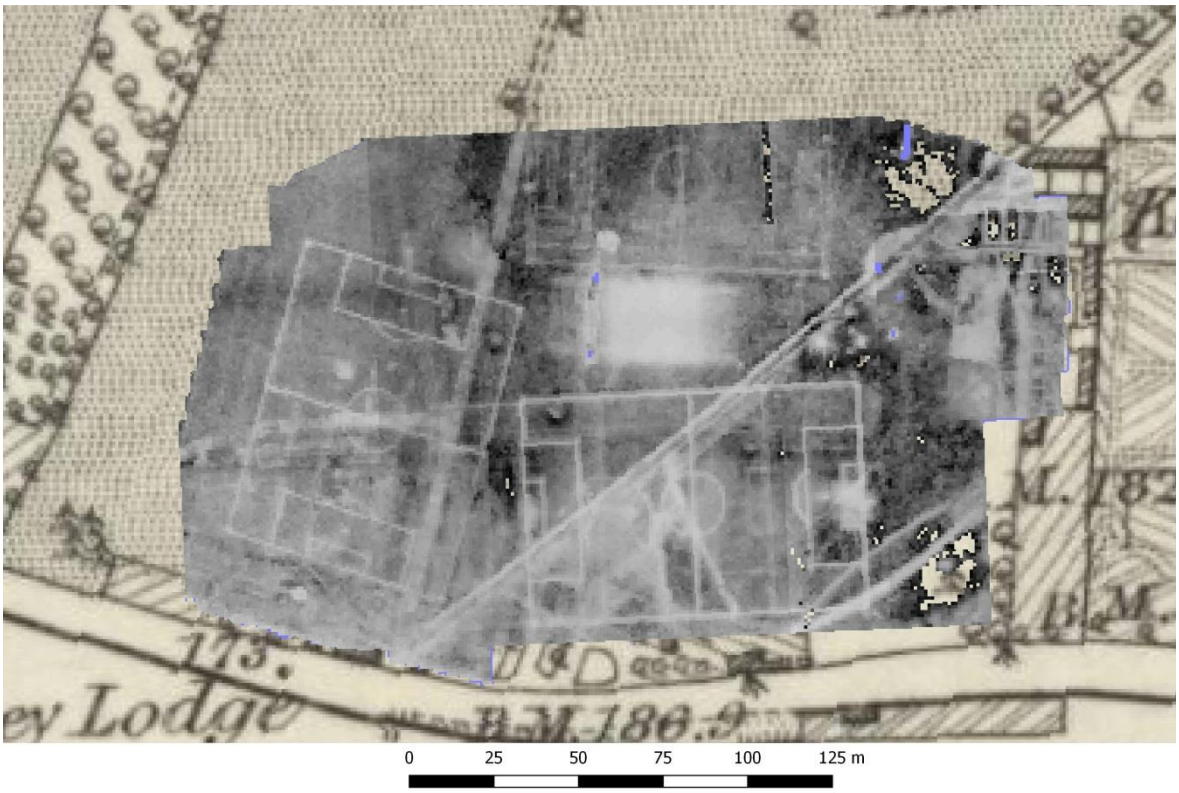
- The trackway running from the Turkey Lodge gate to the northeast corner of the survey area and on into the park. This is in exactly the same location as several of the maps available to us, (Figure 5). The responses seem to indicate a central dry area with a damper ditch either side. This implies it was constructed for wheeled vehicles. Figure 4 shows the resistivity plot superimposed on the 1880 Ordnance Survey map and the exact alignment of the trackways.
- The kennels in the north east corner of the survey area are exactly the same as those shown on the 1838 Tithe map (Figure 5).
- Slightly south of the kennels is another structure, the purpose of which is not known. It is not an old Sports Pavilion because the original 1927 Sports Pavilion was superseded by the current one in 1999 in the same location. The date of this structure is unclear and it is not shown on any maps that we have seen.
- Sweeping in a curve across the south east corner of the survey area is another trackway, somewhat smaller than that shown in the 1785 map. The implication is that it runs from the Cricket Lodge and runs to the kennels. There is a hint that this trackway exits the survey area close to the 1785 map trackway.
- The current main football pitch is shown clearly in the survey. Continuous line marking in the same spot causes changes to the soil structure which are picked up by the survey. The previous main football pitch was located approximately 20 metres further west and its shadow can be clearly seen. The pitch was moved about 30 years ago. The curved trackway discussed above would appear to respect the original position of the main football pitch.
- Further west the markings for a training pitch are visible. This pitch is no longer marked out or used.
- The cricket square emerges as a damp (pale) area. This is probably due to the relatively high clay content retaining moisture.
- A second trackway running slightly east of north from the Turkey Lodge gate. Figure 4 shows the resistivity plot superimposed on the 1880 Ordnance Survey map and the exact alignment of the trackways.

- On the north side of the survey area, the current training pitch is visible. The north touchline is not visible because the delays caused by the weather meant that the last line of partial grids on the north of the survey area has not been surveyed.
- There is a faint straight line response that is likely to be a trench for a water pipe. This faint line has a branch curving to the stopcock beside the cricket square.

However, the resistivity survey has not revealed any indications of the location of the Turkey Lodge. The location of the associated gate into the park is clear because of the convergence of the trackways, but there is no trace of the Lodge itself – this is surprising.

It is also apparent that the western boundary of the sports field has moved east since the 1880 map (Figure 4) Its location on the 1880 map looks the same as the field boundary on the 1706 map and the 1838 tithe map (Figure 5).

Figure 4. *Resistivity Survey overlaid on 1880 Six inch Ordnance Survey map*



7. **Discussion of Results**

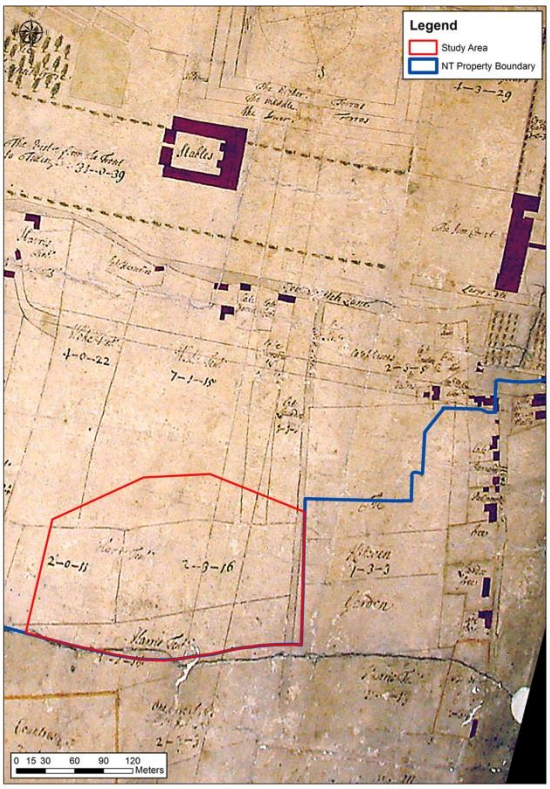
The 1838 tithe map shows a structure named as the Huntsman's House in the same location as the structure now known as the Cricket Lodge. When the gateway was opened, the trackways were switched to the new entrance, avoiding the cricket and football pitches. The evidence would point to this change happening between the 1874/75 Ordnance Survey map and the 1898 Ordnance Survey map which shows that the trackways have been moved. Stylistically, the architecture of the Cricket Lodge is earlier than this period, so probably was the original Huntsman's House.

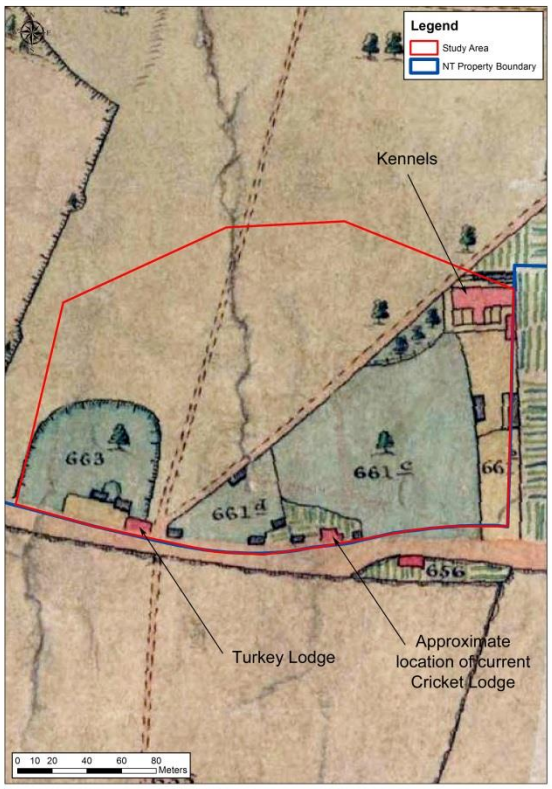
The new kennels in the northern part of the Park were also constructed around this time.

The complete disappearance of the Turkey Lodge is surprising. Perhaps the best explanation is that the removal of the Turkey Lodge was also part of the work undertaken on the sports field at this time. Because the site was to form part of the sports field, more care than usual was taken to completely remove the structure and its foundations.

Figure 5. *Petworth estate map 1706 and 1838 tithe map showing survey area.*

1706 estate map *1838 tithe map*





8. Conclusion

This survey has demonstrated that the main archaeological features in the area of the two main football pitches and the cricket square are two trackways. Thus there is no archaeological reason for not developing this area for sports purposes.

However, if there were to be development proposed in the area of the old kennels, further archaeological work may be required.

Steve Cleverly, Trevor Davies, Mike Kallaway

CDAS Survey Team Leaders

October 2019

APPENDIX 1

CHICHESTER AND DISTRICT ARCHAEOLOGY SOCIETY RISK ASSESSMENT FORM

SITE NAME: Petworth	**SITE CODE: Petworth**	**ASSESSMENT BY: Trevor Davies** **DATE: 25/9/2019**	**PAGE 1 OF 2**
ACTIVITY: Surveying (Week commencing 14th October 2019)		**No. of people present: (Min 2 / Max 16 at any one time)**	

HAZARD IDENTIFICATION

HAZARDS IDENTIFIED	People at risk (tick)		Likelihood of injury (tick)			NOTES	ASSESSED BY
	Volunteers*	Public	Probable	Possible	Remote		
1. Beware ticks	✓			✓		From deer – can cause Lymes disease	
2. Avoid leptospiosis	✓			✓		An infectious disease that affects humans & animals	
3. Exposure to sun, wind and rain	✓			✓		No shelter available on site	
4. Rough and wet ground	✓			✓		Potholes dug by animals and nighthawks	
5. Insect bites	✓			✓			

* Includes CDAS members and non-members.

ACTION PLAN

Hazard No.	MEASURES REQUIRED TO REDUCE RISK TO ACCEPTABLE LEVEL	NOTES	All measures in place. Signed/dated by Site Supervisor
1	Check for skin for ticks		
2.	Wash hands before eating		
3.	Volunteers advised to bring and use suntan cream and drink plenty of fluid. Use of hats and windproof jackets advised		
4.	Boots or wellingtons to be worn where possible	Not possible when using magnetometer	
5.	First Aid kit available		

CHICHESTER AND DISTRICT ARCHAEOLOGY SOCIETY RISK ASSESSMENT FORM

SITE NAME: Petworth	SITE CODE: Petworth	ASSESSMENT BY: Trevor Davies DATE: 25/9/2019	PAGE 2 OF 2
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HAZARD IDENTIFICATION

HAZARDS IDENTIFIED	People at risk (tick)		Likelihood of injury (tick)			NOTES	ASSESSED BY
	Volunteers*	Public	Probable	Possible	Remote		
1. Spikes on resistivity machines	✓			✓		Care in use	
2 Sharp flints in the ground	✓			✓			
3. Manual handling	✓			✓			
4. Beware Brown tailed moths	✓			✓		Can cause rash/asthma/eye irritation	
5. Falling chestnuts	✓			✓			

ACTION PLAN

Hazard No.	MEASURES REQUIRED TO REDUCE RISK TO ACCEPTABLE LEVEL	NOTES	All measures in place. Signed/dated by Site Supervisor
1.	Volunteers advised. First Aid kit, available		
2.	Volunteers advised. First Aid kit available		
3.	Volunteers reminded of correct lifting procedure. Warning against becoming tired.	Ensure those carrying the equipment are rotated regularly.	
4.	Don't touch the moths		
5.	Wear a hat		

* Includes CDAS members and non-members.