

Lacock Abbey site of Botanic Garden

Results of Geophysical Survey, November 1997 (ST91756845)

On November 5th and 7th 1997 a geophysical survey was carried out of the area of the 19th-century botanic garden planted by William Henry Fox Talbot between 1825 and 1877.

The garden is enclosed by walling and lies south of allotment gardens and on the north side of the converted barn and lodge which now contains the Fox-Talbot Museum and visitor reception area.

Survey Method

All of the enclosed garden was surveyed using a resistivity meter with the exception of the south corner (A) where the ground was overgrown with scrub and crossed by gravel paths.

A Geoscan RM15 was used with 0.5m probe separation. Readings were taken at 0.5m interval with 1.0m traverses. The survey took place within 20m grid squares using the north wall of the garden as the base line. The north-east corner of the garden was the 0.0m point on the baseline. The results from the survey were good.

A Fluxgate Gradiometer was used to survey the central four 20m squares of the garden. The machine used was a Geoscan FM36. Readings were taken at 0.25m intervals with 1.0m traverses.

Results

The geophysical results have been compared with earthworks and building remains visible on the ground and on historic maps and drawings. The most useful maps are the 25 inch to one mile Ordnance Survey maps for 1885 (fig 1) and 1901 (fig 2). The trees areas of bushes and garden features were sketch plotted onto an enlargement of a modern O.S. map c.1980 (fig 3).

Features on figs. 1-3 are numbered in **red** with corresponding anomalies on the resistivity plot fig.4. and gradiometry plot fig.5. Further plots are enclosed for comparison. Enlargements of the 1714 (fig.6), 1764 (fig.7) and 1840 (fig.8) maps are enclosed.

1. A dark line of high resistance corresponding with a path shown on the 1885 and 1901 maps
2. High resistance anomaly following the line of the main east-west path shown on the 1885 and 1901 maps. Paths **3, 14, 6, 9** and **10** branch from this main track. It is still in use as the route between the gardener's office and the gateway to Lacock Park.
3. High resistance anomaly following the line of a north to south path linking the Park gateway with the entrance to the allotment gardens (the kitchen garden on figs 6 & 7) in the north wall. Still in use and shown on the 1885 and 1901 maps.
4. High resistance anomaly following the line of an east to west path running parallel with and 3m south of the north boundary wall. West of **3** it follows the line of a path shown on the 1885

and 1901 maps. The path also is indicated on the plot to the east of 3 but not shown on the maps.

5. A rectangular distribution of high magnetic anomalies indicates the position of a greenhouse shown on the 1885 and 1901 maps. The size the feature is approximately 18m east-west by 10m north to south.

6. High resistance anomaly following the line of a path aligned north-south shown on the 1885 and 1901 maps.

7. High resistance anomaly following the line of an east to west path shown on the 1885 and 1901 maps.

8. Area of high resistance with areas with high magnetic anomalies indicating the position of a green house against the west end of the north boundary wall. This area has a limestone floor and areas of ironwork still visible. Three brick flues can be seen built into the limestone boundary wall showing that hot walling was being used here for lengthening the production period for fruit trees and vines. Within the western half of the boundary wall are four blocked windows. At the position of the east end of the greenhouse is a slate water butt which the linear anomaly **12** branches from.

9. High resistance anomaly following the line of a path aligned north-east to south-west shown on the 1885 and 1901 maps.

10. High resistance anomaly following the line of a path shown on the 1980 map. An extension of the main east to west path **2** to a gateway in the west boundary wall. Not in use in 1997.

11. High resistance anomaly measuring 2m by 2m at the location of a small building shown on the 1885 and 1901 maps.

12. A linear feature of low resistance aligned north to south traceable for 50m from the north wall of the garden south to the edge of an unsurveyed area of bushes. This is a metal pipeline as the same feature shows up as a high magnetic anomaly on the gradiometer plot. It crosses the position of the greenhouse **5**. At the north end of the feature is a slate water butt and 12m south of this is a water trough and it is probable that this anomaly marks the position of the water pipeline.

13. A rectilinear area of high resistance on the north side of path **2**. Occupies the position of the south-west corner of the greenhouse **5**. Perhaps the footings of a building measuring 8m north to south and 6m east to west built before the greenhouse or a more substantial element of the greenhouse which gives higher resistance responses.

14. A short length of high resistance readings aligned north-south on the south side of path **4**. This probably marks the position of a path shown on the 1885 and 1901 maps but destroyed by the cultivation indicated by the low resistance area **24**.

15. A small area of high resistance in the north-east corner of the garden indicates the position of a small building about 4m by 4m shown on the 1885 and 1901 maps.

16. A linear anomaly of high resistance aligned south-east to north-west and following the line of a pathway shown on the 1885 map but not the 1901 map.

17. A rectilinear feature of high resistance average 5m wide enclosing a square area 15m wide of low resistance and aligned with the path **1** and south-east boundary wall and the north wall of the barn to the south-west. The explanation for the feature is unclear but it may be partly due to modern services for drainage and sewage. Outlet pipes are visible in the south-east corner of the survey (see fig 3). This area of high resistance may indicate the position of pre-18th century walls or paths and it would be valuable to carry out a small test excavation where **12** crosses **17** to determine the nature of this anomaly. Medieval walls were found under the barn 20m to the south (Papworth 1995) and there is a possibility that further walls may be buried here.

18. A area of high resistance aligned north-west to south-east and roughly parallel with **17** it measures 12m by 6m and may be buried building rubble or a relatively undug area between two garden beds.

19. A linear anomaly of high resistance aligned north-west to south-east 3m wide and 11m long appears to link **1** with **2** and may be the position of a path not shown on the 1895 and 1901 maps.

20. An area of lower resistance within the area defined by **17**. It may have been an area of dug ground, building interior or enclosure interior.

21. An area of lower resistance flanked by **17** and **18** may be the position of dug ground perhaps a bedding trench.

22. An area of lower resistance flanked by **18** and **19** may be the position of dug ground linking with **21** to the south-east to form a U-shaped garden bed but not shown on the 1885 or 1901 maps.

23. A garden bed aligned north to south shows as much lower resistance than the surrounding paths and building **2, 3, 4, 15**. The bed is defined by an edging of limestone slates and is still visible on the ground.

24. A large area of low resistance defined by paths **6, 4, 3, 2**. It has been dug over and has only recently 1997 been put down to grass. The recent cultivation dug up path **14** and the area of the greenhouse **5** with the paths that flanked it on the north and west sides.

25. Area of lower resistance on the north side of the path **4** lies against the north boundary wall and is edged on the south side by limestone slates. This is a garden bed although of higher resistance than the cultivated ground **24** and **26**.

26. An area of low resistance flanked by paths **7, 6, 10** appears to be like **24** an area of cultivated ground.

Map Evidence

1714: The earliest known visual representation of the survey area is the Estate map of 1714 which describes it as the Common Yard. The buildings on the south side are described as stables. The east wall is depicted as a straight rather than its present curved alignment. The entry from the east was at the south end of this wall. The entry to the kitchen garden in the north wall was in the approximate position of the present entrance. A rectangle presumably a building is marked on the west side of the north wall entrance and another is shown near the middle of east wall both lie against these boundary walls.

1764: The estate map describes this part of Lacock as the stableyard. There are buildings and divisions within the enclosure but these are difficult to determine from photocopies without looking at the original document. The line of the east wall curves in the same way as the present wall. A building probably existed at the north end of the east wall where there is still a building and another is indicated half way along the east wall associated with a boundary parallel with the east wall. An east-west division crosses the area slightly north of the present trackway **2 / 10** on the resistivity plot. To the south of this the stableyard is divided into four roughly equal quadrants by boundaries of some kind whether these were tracks, walls or fences is not known. The porches on the barn are shown on this map but not on the map of 1714.

1840: The tithe map does not show any detail within the enclosure and it is described as a garden.

The first maps showing the garden in any detail are the 1885 and 1901 Ordnance Survey maps. It would be worth having a copy of the 1920s and 1930s editions of the 25 inch to a mile O.S. maps.

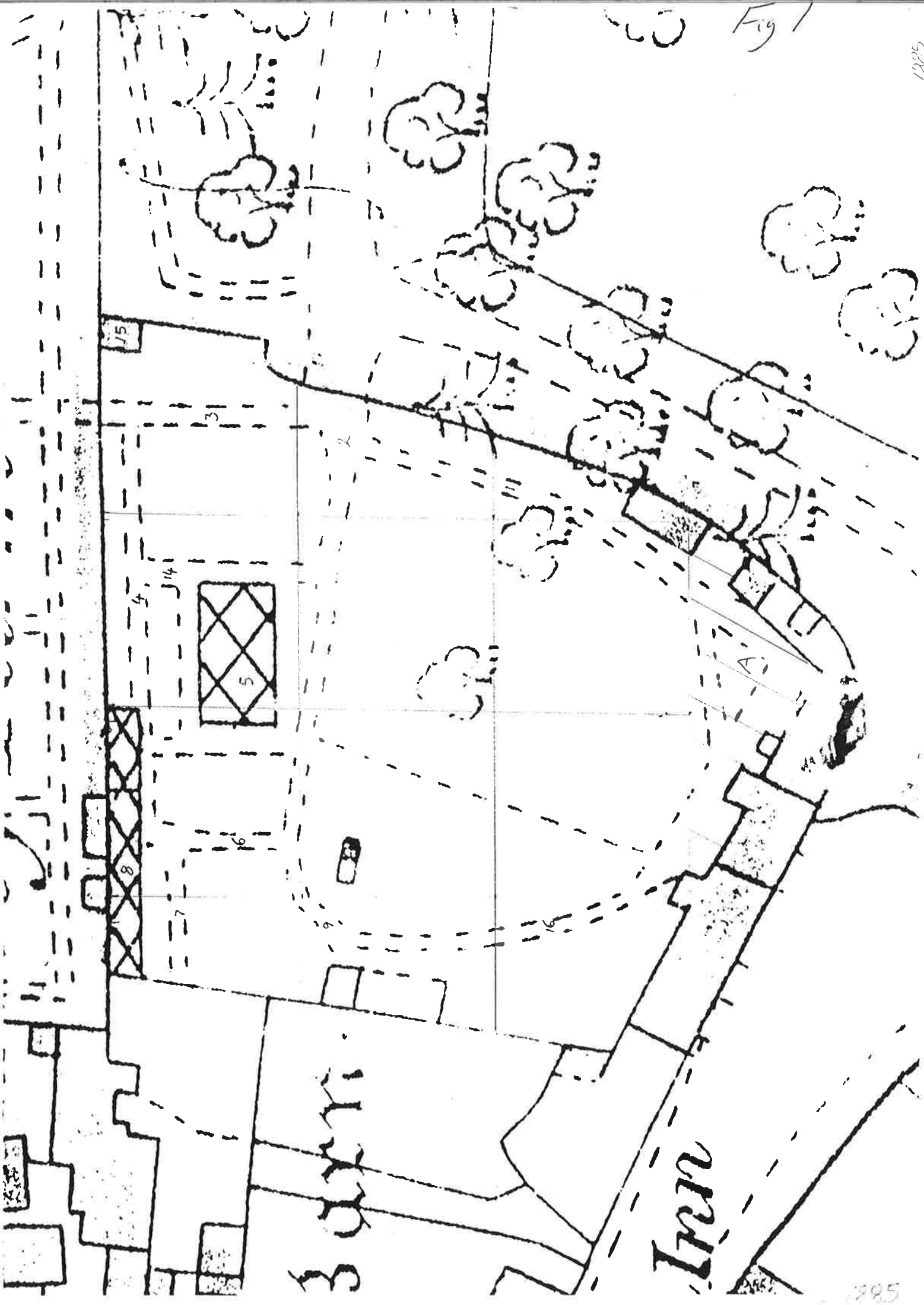
Letters of 1829-1840 describe elements of Fox-Talbot's gardening at Lacock (Nicholas Pearson 1993). Further research on the botanic garden is planned.

The geophysical survey was carried out in November 1997 by Nick Hanks, Rosie Edmunds (Avebury Warden), Martin Papworth (Archaeologist for Wessex) at the request of Graham Heard (Property Manager) with advice from Alan Bird (Head Gardener)

Papworth, M., 1995, Archaeological Excavations at Lacock Barn and Lodge, National Trust
Archaeological Report.

Pearson, N., 1993, Historic Landscape Survey and Restoration Plan, Report for the National Trust, Nicholas Pearson Associates Ltd.

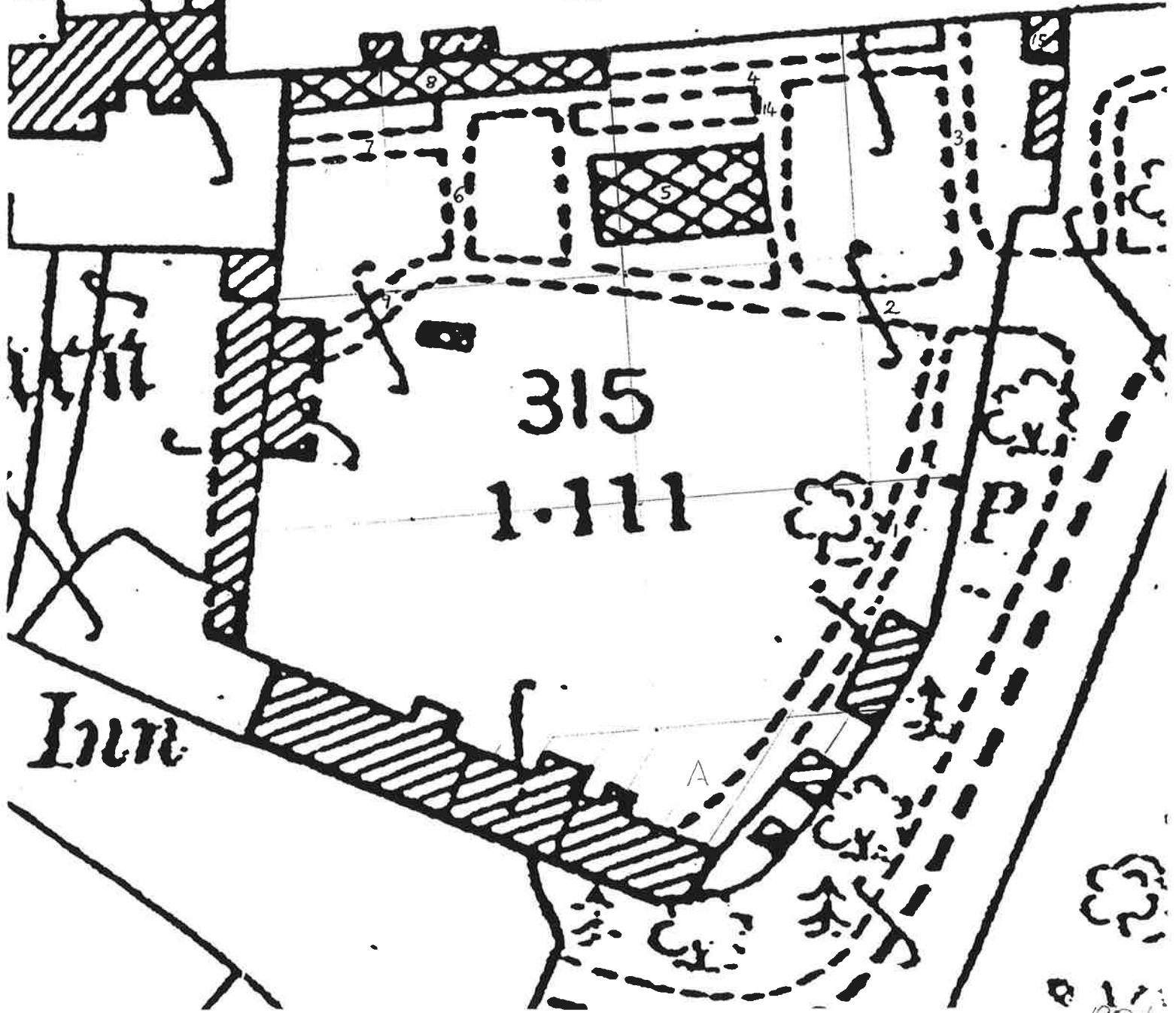
Fig 1



314

1.657

Abbey Farm



315

1.111

Inn

5751
22.156ha
54.75

Fig 3

4 BELLIED WINDOWS

FAHES

FLUE

WATER TROUGH

BRICKEN
LIMESTONE
FLOOR

WATER
TROUGH

BUSHES

BUSHES

POSITION
OF SERVICE

Lodge

(Augur

• = TREES

- - - LIMESTONE
SLATE EDGING

WALL

Cross
(remains of)

7932

1390

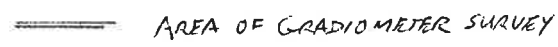
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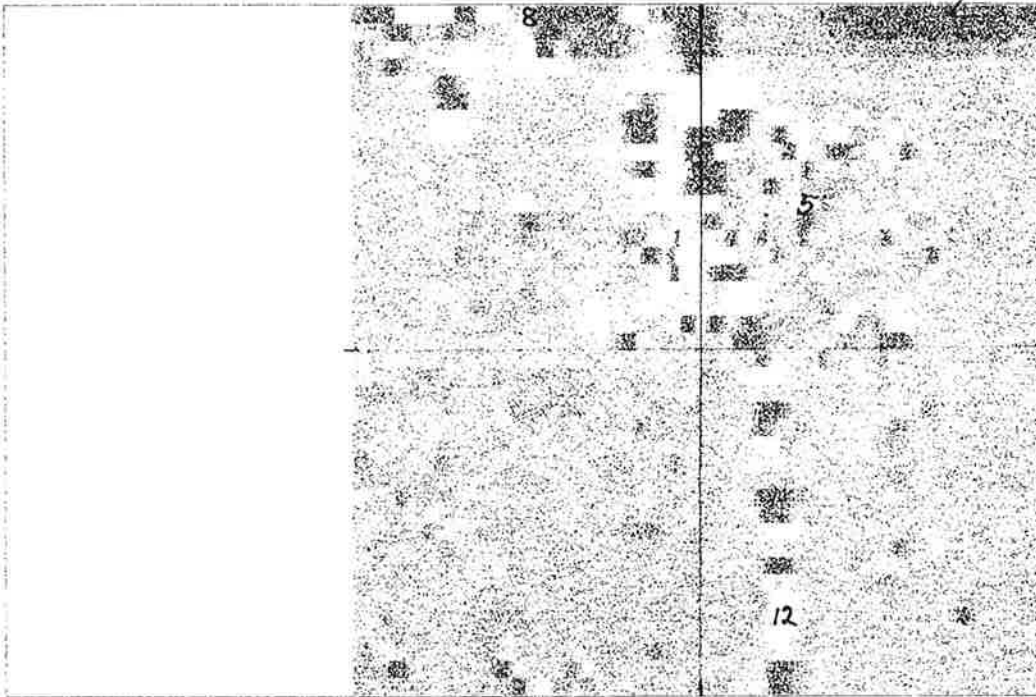
Fig 5

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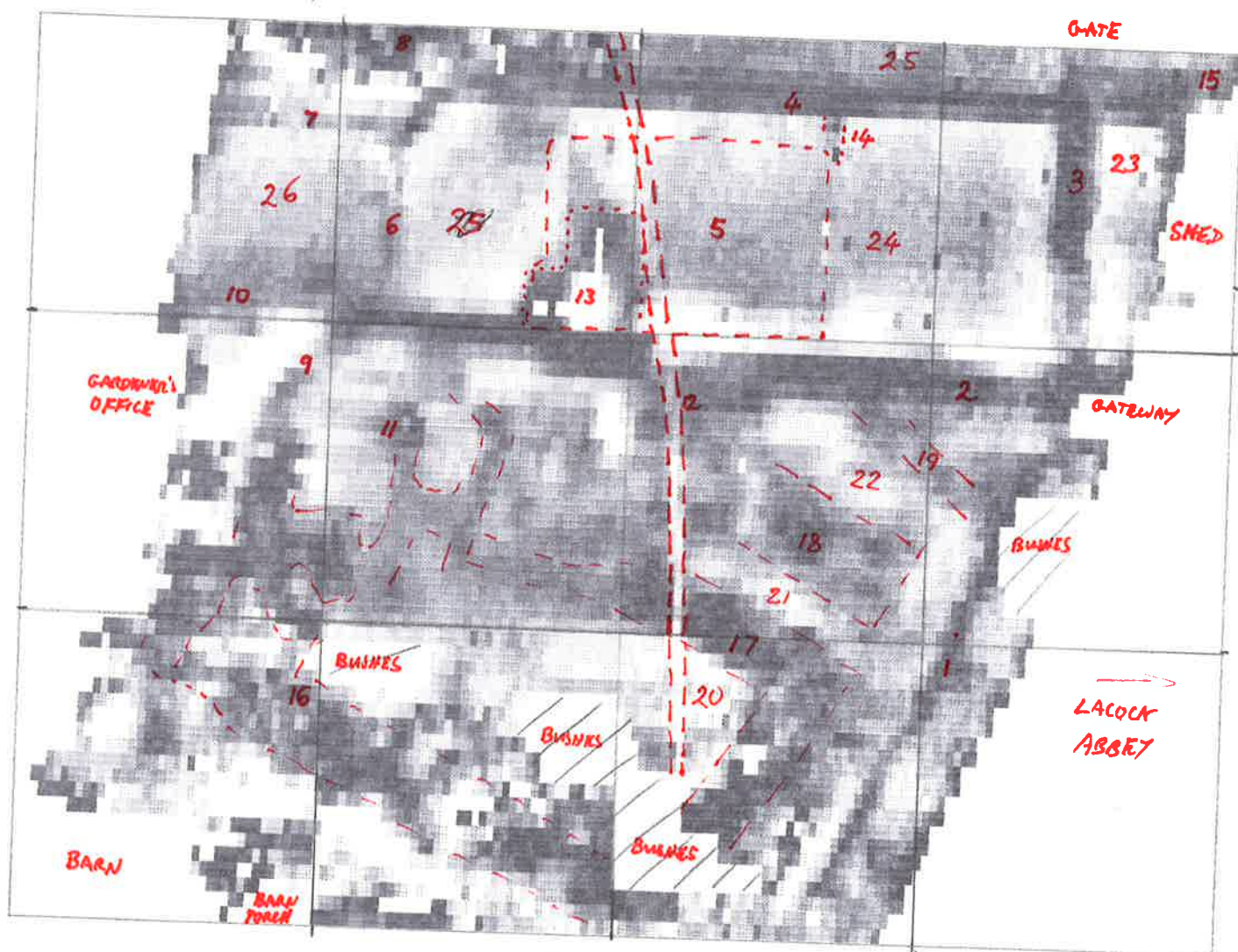
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Site : Iacoch Gradiometer Survey 3 Scale 1:440 3
Comp. : c2 3
#####
Dot-Density Plot (Clip) Size x 1 3 Black Off 3
#####
Minimum -1 3 3
Maximum 3 3 3
Contrast 2 3 3 Black Positive 3
Units Std.Dev. 3 3 White Negative 3
#####

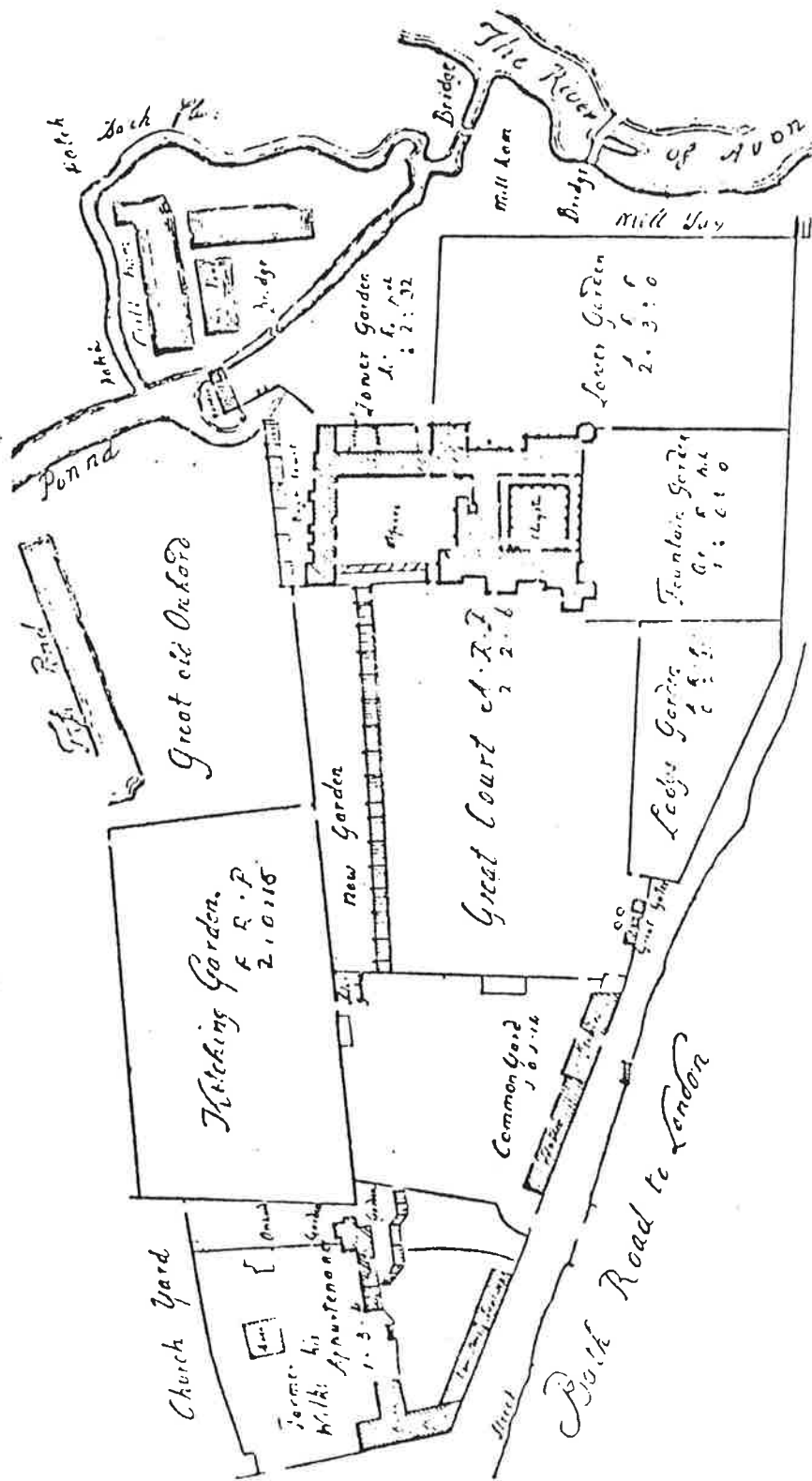
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POSSIBLE SITE
OF BUILDING
1714 MAP



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ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD?
3 Site : lacock Resistivity Survey 3 Scale 1:443 3
3 Comp. : c5 3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD4
3 Pattern Plot {Clip} Size x 1 3 Block Off 3
CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD4
3 Minimum -1 3 Grey Levels 17 3
3 Maximum 1 3
3 Contrast 1 3 CDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD4
3 Units Std.Dev. 3 3 Black High 3
@DDDDDDDDDDDDDDDDDDDDDDDDA0000000000000000000000000000000000Y
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Lacock Abbey - Tracing of estate map of 1714
(from Brakspear 1900)

Antling
Garden

1.2.13

134-2-2-4

534-2-2-4

1.2.13

537-2-2-4

1.2.13

537-2-2-4

1.2.13

1.2.13

1.2.13

1.2.13

- 1 Laycock Abbey Offices, Coach Road, Pleasure Grounds,
Ponds, Stew Courts, Flower Garden and small orchard
100 Home field
371 Marsh Mead
102 Yonder Cow field or New Leaze
103 Hither Cow field or Green Sowberry
2 Kitchen Garden
3 Garden
4 Barn Lodge and Garden
290 New Bridge Mead
295 Popes Hill
370 Fattening Leaze

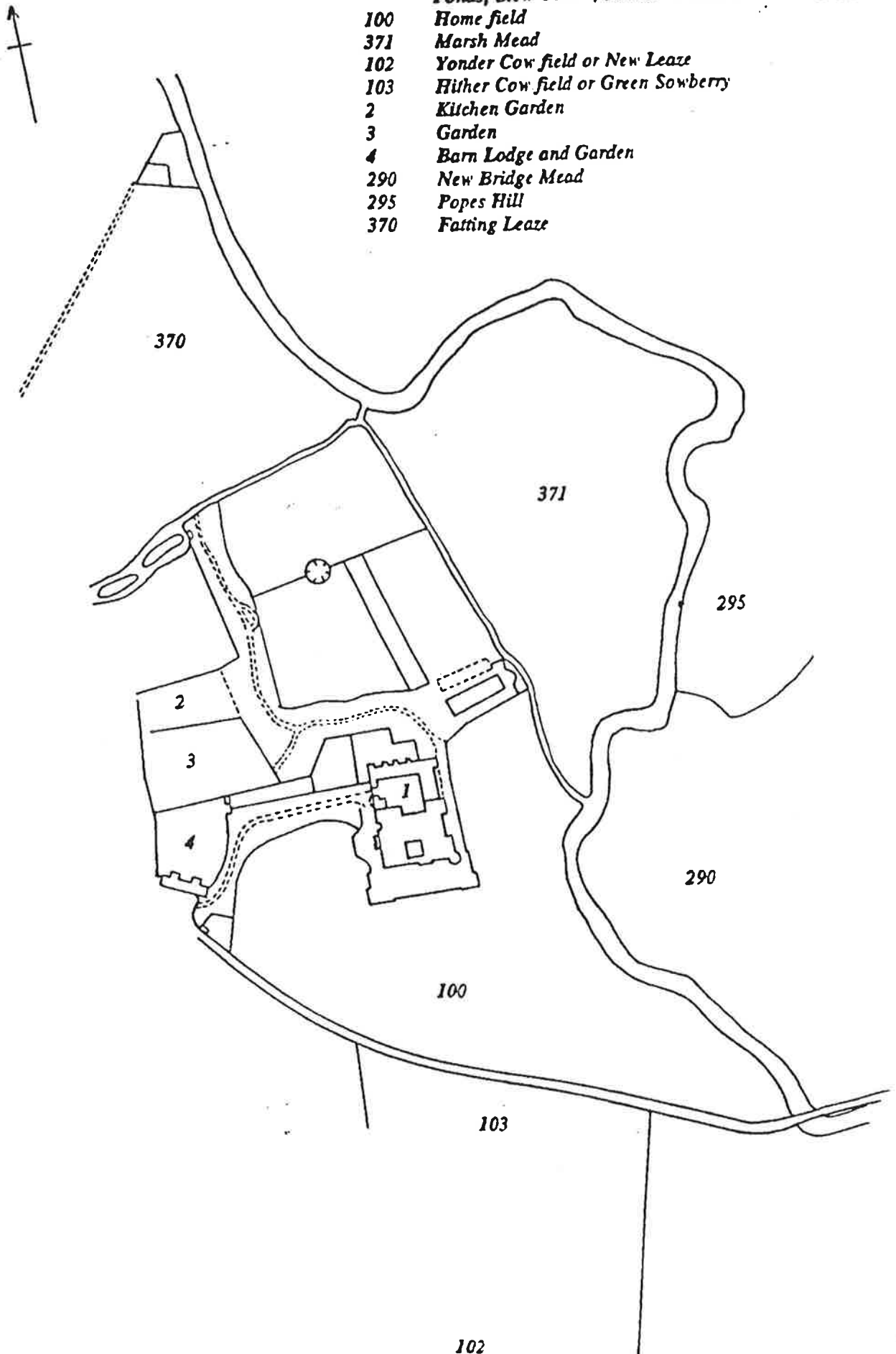


Fig. 4: Lacock Abbey - Tracing of tithe map of c1840

