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Botanic Gardens
High Street
Oxford



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The Well, Botanic Gardens, Oxford

Historic Building Investigation and Recording

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The Well, Botanic Gardens, Oxford

Historic Building Investigation and Recording

Summary

Oxford Archaeology has undertaken a small project to record a well which has been partially exposed towards the southern corner of the walled garden at the Botanic Gardens, Oxford. The well was revealed by contractors working to clear the felled branches of an important old Black Pine tree which had partially collapsed.

The stone-lined well has a diameter of 85 cm and although it is largely filled with water it was possible to confirm that it was at least 2.8 m deep (below ground level). The stone-lined walls of the well stop c.50 cm below the current ground level and above this there appears to be the fragmentary remains of a rougher structure which may once have converged to form some form of a cover over the well. This is probably the remaining section of a rudimentary cap constructed over the well when it fell into disuse although it is possible that it related to a pump on top of the well.

There appears to be no clear documentary reference to a well here and it is not shown on historic maps. The Ordnance Survey 1:500 town plan from 1876 shows the path distinctly curving around this point, as if there had been a feature here such as a well, but there is a tree shown on the footprint of the well. Presumably the well had been a relatively early feature (18th-century?) and that it had already been removed by 1876, possibly with a tree placed over it to form a simple cap.

It may be slightly surprising that this utilitarian structure from where gardeners would have taken water to feed the plants, would have been located in the main walled garden when it could have been sited immediately outside the wall just a few feet away. This may be an indication of how the gardens were principally a scientific institution, albeit one that did allow visitors, rather than a formal garden and aesthetics were not an over-riding concern.



The Well, Botanic Gardens, Oxford

Historic Building Investigation and Recording

1 INTRODUCTION

1.1 Background

- 1.1.1 Oxford Archaeology (OA) was commissioned by The University of Oxford (Estates) to undertake historic building recording on a well which has recently been exposed at the Botanic Garden, High Street in Oxford. The well was uncovered by arboriculturalists who were working in the area to clear a great Black Pine tree following its unexpected collapse.
- 1.1.2 The City Archaeologist, David Radford, was consulted and he recommended making a record of the historic structure while it was exposed and before it is capped. The recording is not being undertaken to any formal planning condition.
- 1.1.3 The Black Pine tree was the largest and most important tree at the Botanic Garden and it is believed to be over 200 years old. It had strong associations with JRR Tolkien and the last photograph of the author was of him standing with his hand against the trunk. The tree collapsed while a cultural event was being set up around it and while musicians were preparing beneath its branches. The main limb of the tree came away from the trunk and collapsed onto the nearby stone wall, dislodging several coping stones.
- 1.1.4 OA previously undertook an archaeological watching brief at the Botanic Garden between November 2010 and January 2012 during realignment of the pathway within the walled garden. The watching brief observed evidence for a sequence of worked soil horizons dating between the 17th and 19th centuries together with the foundations of a 19th century greenhouse.
- 1.1.5 The Botanic Garden is a Grade 1 registered park and garden.

1.2 Aims and objectives

- 1.2.1 The main aims of the project were:
- To take the opportunity afforded by the exposure of the well to provide a record of the structure for the Oxford Urban Archaeological Database;
 - To make that record publicly accessible through a report (a public document) and a project archive deposited with a public institution.

1.3 Methodology

- 1.3.1 The on-site investigation included photographic, descriptive and drawn recording. The drawn recording comprised the production of a simple plan to show the location of the well while the photographic and descriptive work complemented each other and was intended to describe, explain and interpret the exposed structure.
- 1.3.2 The recording was limited in scope by the relatively small area of the well which was visible and by health and safety concerns. Measurements were taken at the surface but

because the well was not fully exposed (ie the void beneath the surface was wider than the hole at the surface) it was not possible to take full measurements within the well. Some dimensions were estimated or measured as accurately as possible.

- 1.3.3 The photographic recording consisted of general views of the surrounding area and images within the well. It was undertaken using black and white print film (35 mm) and with a digital camera.
- 1.3.4 The on-site investigation was undertaken on 26 August 2014. The recording has been supported by a limited programme of historical research focusing on maps and the principal secondary sources.

2 HISTORICAL BACKGROUND

2.1 Location, geology and topography

- 2.1.1 The Botanic Gardens are located at the eastern end of the High Street, to the south-west of Magdalen Bridge (Fig. 1). The site is bounded to the north by the High Street, to the west by Rose Lane, to the south-west by Merton Field and to the east and south-east by a branch of the River Cherwell, draining to the south.
- 2.1.2 The site lies on level ground at approximately 57 m OD. The underlying geology is 1st Terrace River Gravel (BGS Sheet 236).

2.2 Archaeological and historical background

- 2.2.1 The Botanic Garden or 'Physic Garden' is the oldest of its kind in Britain. The garden was established by Henry Danvers, 1st Earl of Danby who in 1621 bought out Humphrey Ellis, the sitting tenant of 5 acres at the north-east corner of Christ Church Meadow and arranged for the University to lease the ground from Magdalen College. Part of the site had been the Jewish burial ground until 1293 and it is also within the vicinity of the precinct of the Trinitarian Friars. Danvers also gave five thousand pounds to set up a physic garden at the site for "the glorification of God and for the furtherance of learning".
- 2.2.2 The main gateway to the gardens, which was based on a design by Inigo Jones, was completed in 1632 and the stone boundary walls, which were constructed using a face of local Kidlington limestone around a rubble core were finished in 1633. The construction also included considerable works to substantially raise the ground level to prevent the overflowing of water. Unfortunately the cost of these initial capital works was greater than anticipated and by the time that the gardens were laid out there was little money left to pay for the running of the garden. The uncertainty created by the Civil War also delayed plans for developing the gardens as did the continuing issue of lack of funds.
- 2.2.3 Danvers died in 1644 and bequeathed a stipend to pay for a Professor and a gardener at the gardens but this turned out to be less valuable than anticipated and there was no professor in place until 1670 when Dr Robert Morison was appointed.
- 2.2.4 The garden had been tended by a gardener, Jacob Bobart, since 1632 and in 1648 he published the first catalogue of the plants of the garden. It appears that for a number of years the University failed to pay Bobart's salary and he helped to make ends meet by selling fruit grown in the Garden. In 1683 Morison died and Bobart's son, also called Jacob succeeded to the chair. Accounts of the garden from this period are not entirely complementary and it was described by one as being 'more like an orchard than a garden'.

- 2.2.5 In the second quarter of the 18th century the garden was greatly enhanced through Dr William Sherard who helped fund the construction of a new conservatory as well as giving the gardens new plants and a library of botanical works. Sherard died in 1728 and bequeathed £3000 to pay for a new Professor of Botany on condition that the University should pay £150 annually for the maintenance of the garden. At this time the layout of the gardens comprised four quarters, divided by hedge-lined avenues, and this is shown on Figure 4.
- 2.2.6 In the later 18th and early 19th century the gardens appear to have altered relatively little, without any major phases of modernisation, and by the 1830s they were becoming dilapidated. In 1834 Dr Charles Daubney was appointed to the chair and in the coming years he oversaw an extensive programme of improvements including new buildings, new plant and reinvigorated gardens with numerous new specimens. This was funded by a variety of sources including subscriptions, an entrance fee, benefactors and often from Dr Daubney's own pocket.
- 2.2.7 The basis for the surviving garden layout is a rearrangement undertaken in 1884-88 when long rectangular beds, arranged to display plants according to the taxonomic system created by Bentham and Hooker, were laid out. However the basic rectangular path design has developed in a number of forms from the 17th century.
- 2.2.8 The Urban Archaeological Database records isolated finds of clay pipes from the garden in 1851 (UAD Event No 927) and 1958 (UAD Event No1313). In 1954 a 17th century well was found 'close to the intersection of the paths' during 'excavations' (UAD Event No 162).
- 2.2.9 Further background information is available in the Register description (GD1433).
- 2.2.10 *Map evidence***
- 2.2.11 The main early map which shows the Botanic Garden is the map of Oxford by David Loggon dated 1675. This is useful in showing the overall layout of the garden with the entrance gateway and the courtyard divided into four quadrants but it does not show any well or similar feature in the southern corner of the garden which forms the main focus of the current study. The scale and nature of this map means that it is unlikely that a small feature such as a well would be shown.
- 2.2.12 The first edition Ordnance Survey Town Plan of 1876 is of more interest in relation to the current study due to its high level of detail (1:500) and the fact that this map would normally show features such as pumps and wells. At the southern corner of the walled garden, close to the junction between the paths there is a distinct horse-shoe shaped projection where the path surface (gravel?) extends slightly into the lawn or shrubbery. This is at the location of the well uncovered in the current works and it presumably relates to it but the map shows a tree in this location. It is likely that the projection formerly extended around the well but at some point prior to 1876 the well became disused and the tree was planted at this point in its stead, possibly to form a simple cap.
- 2.2.13 Later OS maps are less detailed but they do not appear to show the distinct horse-shoe shaped projection.



- 2.2.14 There is no mention of a well in the various guides to the Botanic Gardens consulted in the current study (see Bibliography).

3 DESCRIPTION

3.1 Introduction and location

- 3.1.1 The well is located towards the southern corner of the Botanic Garden's main walled garden, to the south-east of the Black Pine tree which has recently been lost. It is within a grassed area just inside (ie to the north of) the junction between the paths at this corner. The southern edge of the well is c.3.95 m to the north of the southern garden wall and the eastern edge of the well is c.5.25 m to the west of the east garden wall. It is c.1.3 m in from the edge of the east path and c.35 cm in from the edge of the southern path.
- 3.1.2 As outlined above arboriculturalists working in this area exposed the well, the existence of which was previously unknown. Only a relatively small hole within the ground surface (40 x 40 cm) had been created but this had exposed the larger void of the well beneath.

3.2 Description

- 3.2.1 The well has an irregular, broadly circular plan form, c.85 cm in diameter, and it is lined in roughly coursed stones. A pool of water remains in the well with the surface 1.05 m below the ground level and measurements were taken to show that the water continues down to a depth of c.2.8 m below ground level. This measurement was taken by dropping a stone into the well tied to a rope. At c.2.8 m below ground level the stone reached what felt like a soft silty surface although presumably although the well is likely to be deeper the lower part is full of sediment
- 3.2.2 The stones are generally c.8-10 cm tall by c.12-15 cm long although some isolated stones are slightly longer or shorter. There were c.5-6 courses exposed above the water line.
- 3.2.3 The main coursed stonework is c.50 cm below the ground surface and above this there is a layer of rough stones which partly overhang the top of the well and which may once have formed part of a crude dome or cap over the well. Above this and below the topsoil is a layer of hardcore and pebbles.

4 CONCLUSION

- 4.1.1 The Botanic Gardens in Oxford is an important scientific garden which is the oldest of its kind in Britain. The recent loss of a great Black Pine tree and its subsequent clearance has led to the partial uncovering of a previously known well towards the southern corner of the main walled garden. The well is at least 2.8 m deep, with a diameter of c.85 cm, and it will need to be capped for safety reasons but prior to that an archive record has been created for posterity.
- 4.1.2 The main walls of the well are constructed from simple but well formed coursed stonework which extends up to c.50 cm below ground level. Above this there are fragmentary traces of stone which overhang the top of the well and which may be surviving elements from a cap.
- 4.1.3 The well is not shown on historic maps but the detailed Ordnance Survey Town Plan from 1876 suggests that the path extended around this point with a distinct horse-shoe shaped projection. The well itself is not shown or labelled here and instead there is a tree



marked in this location. It seems likely that the horse-shoe shaped projection was originally formed to provide a gravel surface around the well but that the well was removed at some point before 1876 and it was replaced by a tree, possibly in order to form a type of capping over the void.

- 4.1.4 It is difficult to speculate on the date of the well, partly due to the lack of dating evidence in the roughly coursed stonework, but from our knowledge of the main periods of development at the gardens it seems that an 18th-century date may be most likely. There was a major phase of investment at the site from 1834 and continuing through the mid 19th century but the fact that it had been replaced by a tree by 1876 suggests it probably wasn't from this phase. Indeed it is more likely that the overhaul of the gardens in the 1830s-40s included removing the well and replacing it, probably with other facilities on the outer side of the walled garden.
- 4.1.5 The well could have been from another period of investment in the second quarter of the 18th century or it could have been an isolated addition from another period.
- 4.1.6 The fact that this utilitarian structure was located within the main walled garden is slightly surprising when it is so close to a doorway and could easily have been sited outside the garden just a few feet away. There have been periods in the garden's history when the dilapidated character of the site has been criticised such as the later 17th century when the garden was described as being more like an orchard than a garden, and also in the early 19th century. It could be that the well was an isolated construction in one of these periods when rather than forming part of a larger phase of improvements.
- 4.1.7 It should be noted that rather than being a conventional well with a rope and winch above it may be that this structure had a pump on the top but the evidence no longer survives to determine this.

Oxford Archaeology

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APPENDIX A. BIBLIOGRAPHY

1876 Town Plan of Oxford (1:500)

Gunther RT *The Oxford Botanic Garden* (Guidebook) May 1914

Gunther RT *Oxford Gardens* 1912

OA *University Botanic Gardens: Archaeological Watching Brief*, January 2012

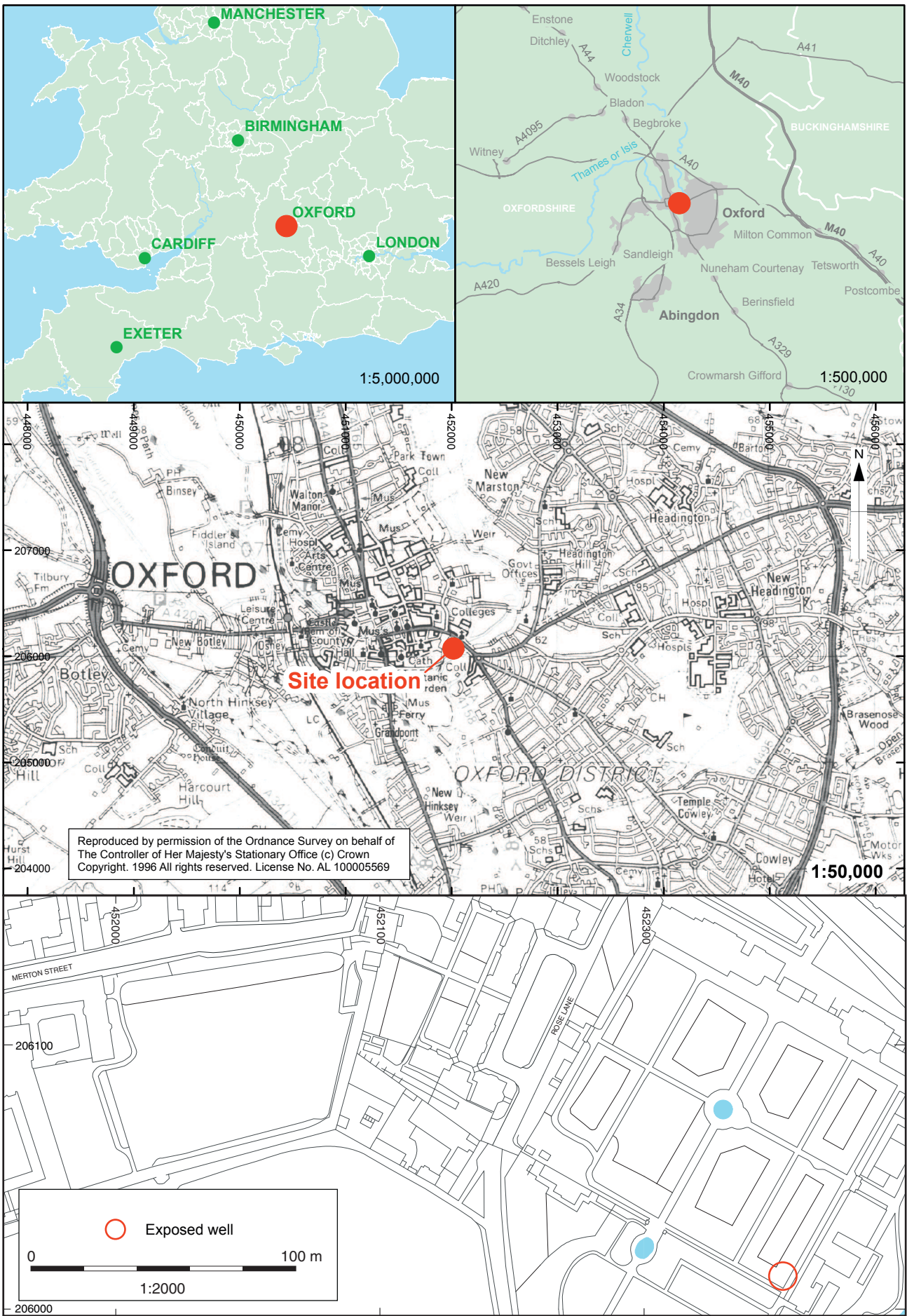


Figure 1: Site location

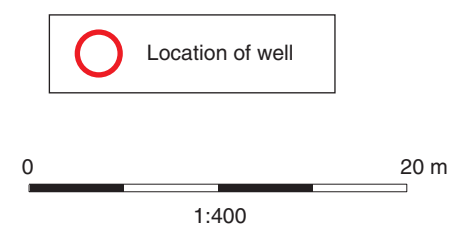
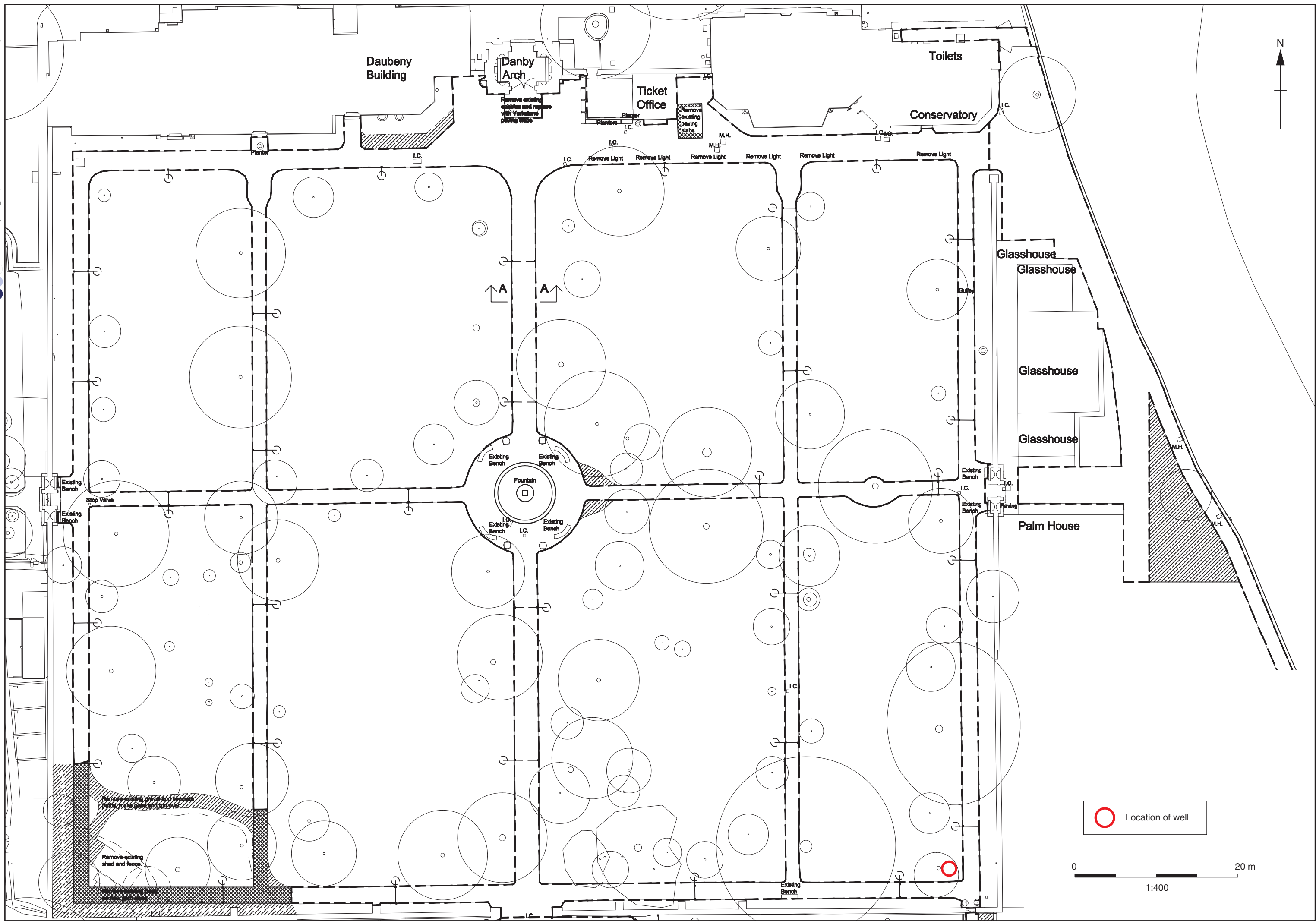


Figure 2: Plan of Botanic Gardens showing well

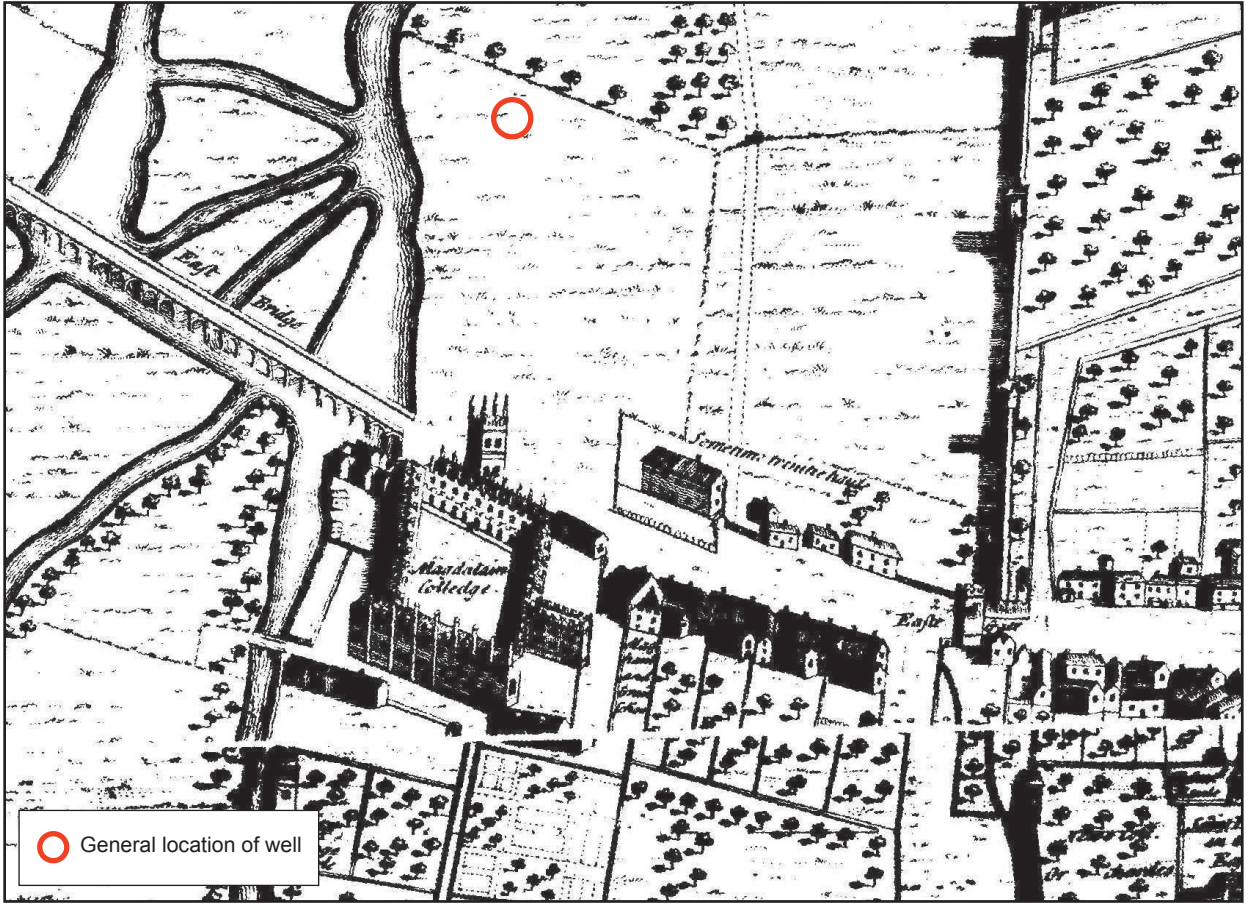


Figure 3: Agas map of 1578



Figure 4: Loggan's map of 1675

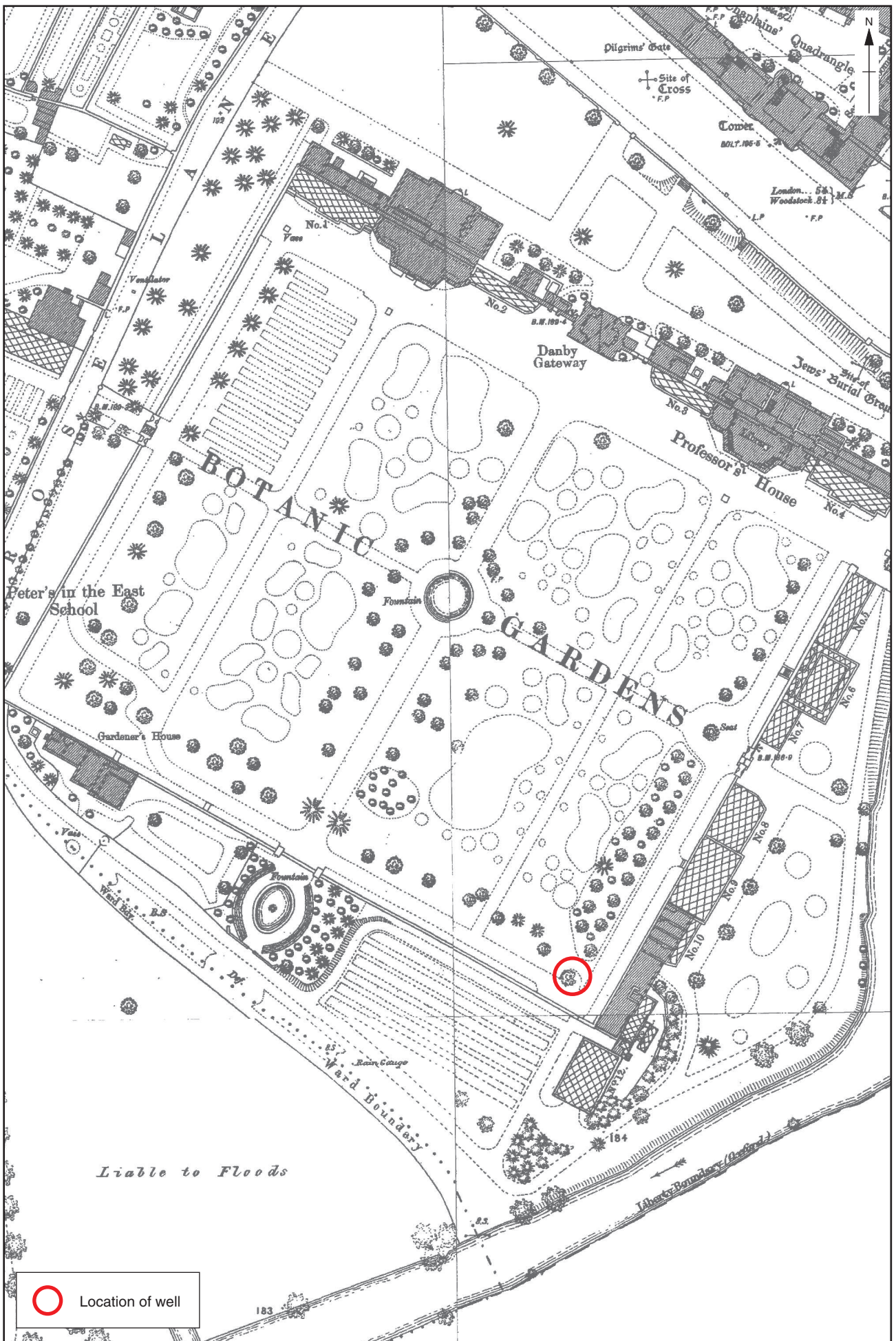


Figure 5: Ordnance Survey Town Plan, 1876



Plate 1: General view showing well in nearground and felled tree



Plate 2: Wall showing damaged area where tree collapsed



Plate 3: Exposed well in relation to south corner of courtyard



Plate 4: Exposed well in relation to south corner of courtyard



Plate 5: Hole in ground surface showing exposed well



Plate 6: Hole in ground surface showing exposed well



Plate 7: Close-up view showing walls of well



Plate 8: Close-up view showing walls of well



Plate 9: Close-up view showing walls of well



Plate 10: Close-up view showing walls of well



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