THE RESTORATION OF VAUCLUSE HOUSE, SYDNEY, N.S.W.

REPORT ON RECENT EXCAVATIONS IN 1982.

Archival Report

E Higginbotham

for the Historic Houses Trust, N S W

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ARCHAEOLOGICAL REPORT

This report has been prepared according to standards and principles described in the Frere Report (Frere, S. S. 1975, Principles of Publication, report of the working party of the Ancient Monuments Board Committee for Rescue Archaeology, Department of the Environment, England).

It is a condition of the excavation permit granted by the Heritage Council of N.S.W. that reports of archaeological excavations and field surveys be published (Heritage Council, N.S.W. Excavation permit, conditions 10-13). With publication in mind, this report was prepared in such a way as to comply with the editorial requirements of the journal of the Australian Society for Historical Archaeology.

Only the central portion of this report is to be published (white paper only).
RECOMMENDATIONS

Approach Road.

The reinstatement of the approach road will require archaeological supervision.

Topsoil may be removed by machine followed by manual excavation with an archaeological team. The lines of fences and the existence of the west roadside ditch still need to be established.

Certain difficulties may be foreseen, namely:
1) drainage of east roadside ditch. During the excavation this was continuously flowing with seepage.
2) road metalling. Consideration should be given to the suitability of the road surface as the primary access route for visitors to the house.
3) the levels of the surface of the approach road and the modern driveway are substantially different. Works to make these surfaces correspond may disturb significant archaeological deposits. An archaeologist should be consulted during the planning stages of this work.

Access to kitchens, stores, and cellars.

Further excavation is needed in this courtyard area to elucidate problems of access. This work will require the services of a skilled archaeological team.

Consideration should be given to the most appropriate surface in this area. At present it is impossible
to make a decision based on definite evidence. The chronology, description and location of all features needs to be more fully understood.

Soil levels around verandah.

With the removal of the raised garden and wall on the west side of the verandah, archaeological excavation (trenches 2, 3, 4) has shown that the soil levels around the verandah have been maintained or reinstated approximately in their 19th century condition.

Pathways within the pleasure garden.

It is recommended that the present work be continued with occasional archaeological supervision as required. Only with the collection of comparative data from each area can pathway restoration be undertaken on positive archaeological evidence.

Present drain, east wall of the kitchen.

Archaeological evidence suggests that this drain dates to the early 20th century (trenches 7, 9).

Sandstone drains.

During excavations and restoration work 2 sandstone drains were exposed. The first (trench 3) is located on the west side of the north verandah. It appears that this drain turns into a rubble drain a few metres from the house.

It is recommended that every precaution be taken to
avoid blockage of this drain, since any overflow may cause erosion of sandy subsoil and the undermining of footings. Any future disturbance of capping slabs should be resealed with clay. Removal of the concrete pathway between the verandah and kiosk may substantially alter the drainage pattern.

The other sandstone drain was located on the east wall of the kitchen (trenches 7,9). Any future work to expose or reinstate this open drain should be preceded by archaeological excavation or supervision.

General recommendations.

It is requested that an archaeologist be allowed to advise on all appropriate stages of the garden restoration from planning through to completion of works.
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Introduction

Vaucluse House is situated in the suburb of Vaucluse, Sydney, in the parish of Alexandria, and county of Cumberland (map reference: Sydney 9130 II N, Sydney Heads. 402523). William Charles Wentworth (1790-1872), statesman and explorer, bought the property in 1827\(^1\), and resided there until 1853\(^2\) with his wife, Sarah (married 1829), and growing family.

W C Wentworth's notable achievements include the crossing of the Blue Mountains with Blaxland and Lawson in 1813. Furthermore, with Robert Wardell, he published the Australian newspaper, the first issue going to press on the 14 October 1824. Other achievements were the introduction of trial by jury in the N.S.W. criminal courts in 1830, and active participation in education and the establishment of Sydney University in 1849. Wentworth's greatest ambition was to secure for New South Wales responsible government, and this was finally agreed by the British Colonial office in 1852, and the constitution ratified by Parliament in 1855\(^4\).

During his residence at Vaucluse, Wentworth initiated substantial improvements with the construction of the present house, offices and out-buildings, substantially completed between 1828 and the 1840s. In 1853 Wentworth left for England
and spent the remainder of his life there, apart from a brief return to Sydney in 1861-1862. After his death in 1872 his remains were returned to the vault on the Vaucluse Estate, now in Chapel Road, Vaucluse. The house remained in the hands of the Wentworth family until 1910 when it was resumed by the Government.

Management and restoration

The house was managed by the Nielsen-Vaucluse Park Trust from 1910-1968 when it was declared an historic site under the National Parks and Wildlife Act, 1967. The Trustees however maintained their position until 1980 when Vaucluse House became the responsibility of the Historic Houses Trust of NSW under the Historic Houses Act, 1980. With the restoration of the house it has been the policy of the Trustees in recent years 'to show the house as the home of the Wentworth family furnished mainly to the middle years of the 19th century but with the accumulation of occupation, until the end of the century, by various members of the Wentworth family and their agents.'

Vaucluse House is fortunate to be one of the few nineteenth century estates to have retained a substantial portion of its grounds surrounding the house and bordering the harbour. Realising this important asset, the Historic Houses Trust has initiated a conservation plan also for the gardens and park. Its objectives are 'to prepare a long term development plan for the Vaucluse House garden and park based on a study of its history', to 'endeavour to
restore something of the 19th century flavour and detail of the garden to provide a more appropriate setting for the house and to give the garden its own intrinsic merit', and finally to 'endeavour to rationalise the relationship between the various buildings which have been lost over time'.

Two important reports have been commissioned and are now available for consultation, namely 'Vaucluse Park and Garden Development', compiled by the Department of Public Works, and 'Vaucluse House, Report on select list of manuscripts' compiled by Mrs Joy Hughes.

Archaeological investigation

The Historic Houses Trust in June 1982 affirmed that 'it was intended that some archaeological research be undertaken in the walled courtyard, west of the stables, and along the original driveway. This work had not commenced when this document was prepared but it is not expected that results would substantially effect the general proposal. The research should, however, be able to provide some useful detailed information'.

An archaeologist was therefore commissioned in 1982 to provide information on the following problems, namely:

1. the nature and course of the approach road to the house.

2. the access to the cellars, kitchen, store, and stables.

The brief was subsequently extended to include the following:

3. soil levels around the verandah on the north side
of the house.

4. the nature and dating of the present drain on the east side of the kitchens.

5. the nature and course of pathways within the garden.

This investigation was intended to provide evidence to be used in the restoration of the house and grounds. Although recommendations are not fully discussed here, they have been included in the complete archival report. This synthesis reports on the major archaeological findings, and includes general recommendations and discussion.

Approach road

Historical evidence. The course of the road from New South Head Road to Vaucluse House may be established from a number of maps of the Vaucluse Estate. The course of Lower Vaucluse Road to the main gates and the private road to the house is very clearly delineated on Higginbotham and Robinson's map of the Municipality of Woollahra, 1889. The position of the approach road as it nears the house is shown in relation to Olola Avenue on plans at the Land Titles Office, Registrar General, N.S.W. (figs.1,2).

Early photographs also provide evidence. Certain photographs of the late nineteenth century, looking south towards the house, indicate that estate fencing bounded the west side of the road from the house only as far as the approximate position of Wentworth Road (fig.3). The eastern side of the road is fenced with post and wire fencing. The
Figure 1. Site plan 1. Location of W. C. Wentworth's estate at Vaucluse in relation to Sydney, and plan of estate. Main features are as follows: a New South Head Road; b Old South Head Road; c Vaucluse Road; d road constructed by Sir Henry Browne Hayes in 1812; e road from lighthouse to Thomas Laycock's grant; f fences; g Greycliffe; h Vaucluse House; k bridle road; m Milk Beach; p Parsley Bay; v vault.
Figure 2. Site plan 2. Vicinity of Vaucluse House, indicating crop marks visible from aerial photographs (dotted lines) and details of buildings and fences from Higginbotham and Robinson, 1889, Map of the Municipality of Woollahra. Contemporary plan of Vaucluse House and pleasure garden indicating archaeological trenches 1-9, sites 10-12, and part of course of approach road and turning circle, reconstructed from archaeological evidence and historical documentation. Main features are as follows: b boardroom (store); c convict barracks; g guardhouse, fuel stores, stores; h Vaucluse House; k kitchen; l laundry; p water tank and pump; s stables, coach-house; x kiosk, y toilet block.
Figure 3. Late nineteenth century photograph of Vaucluse House and grounds, clearly indicating fencing along approach road in front of the house (Wentworth Papers, Mitchell Library, A1441).
Figure 4. Detail of late nineteenth century photograph of Vaucluse House, showing type of fence posts (Wentworth Papers, Mitchell Library, A1441).
Figure 5. A view of Vaucluse House published in the *Illustrated Sydney News*, 22 Oct 1869, indicating the type of fencing among other features.
shape of these posts in close up photographs of related fences suggests that they were made of cast iron (fig.4). Further research is necessary to establish whether this identification is correct. It would be important to know if iron posts for fences were available in this shape during the nineteenth century.

The term estate fencing is used here to describe prefabricated sections of fencing with iron rails and posts. Some examples still remain in various locations near the House and in the Park. The earliest illustration of this type of fencing appears in 1869 (fig.5), although mention is made of a '3 rail iron fence with iron standards' in 1870, and of 'wire fencing' in 1868. Clearly much consideration was given to fireproof materials after the bush-fire which came near to the house on 17 October 1867. Also the Wentworth family did not wish to spoil the appearance of the grounds from the house with heavy wooden fences.

Relatively little is known of the construction of the road, although its equivalent today would certainly be termed a dirt road. In 1855 extensive improvements were being undertaken, as was noted by John Alexander, agent for W C Wentworth:

'he must be spending a good deal of money on the road. The sides of it are raised about a foot which will allow the water to run off but unfortunately the middle of the road is only very little higher
than the sides, and will soon be lower, but as only a portion of the road is made, perhaps the middle is to be raised more.¹⁸

The course of the approach road as it nears the house is documented as early as 1838, and this appears to have been constructed as part of W C Wentworth's building programme for his new mansion¹⁹. This part of the road continued in use until the early 20th century until the formation of Olola Avenue. At this time a driveway leading directly from the house to the avenue replaced the original approach road.

**Archaeological evidence.** Trenches 1 and 5 were placed on the line of the approach road, the first to ascertain the exact alignment of the road and fencing, also details of construction and metalling. The second trench, no. 5, was excavated to locate the exact course of the road.

**Trench 1.** North of the present driveway the ditch on the eastern side of the approach road is visible as a shallow linear depression for a short distance before Olola Avenue. Trench 1 was placed across the road at this point, and an area of 9 by 3 metres (27 sq. metres) was excavated (fig. 6). The total width of the road was found to be c. 5 metres, the east road side ditch excavated and some evidence for fencing located. It was impossible to establish whether or not a similar ditch bounded the west side of the road since the size of the trench was restricted by the present shrubbery.
Figure 6. Trench 1, Section 1. Plan and section of approach road and other features (Conventions are drawn according to A.S.1100 and archaeological drawing practice).
The eastern ditch (28) was 'V' shaped, approximately 1.2 metres wide at the top, with a squared based c.0.6 metres wide. Primary silts and clay filled the base of the ditch to a depth of c.100 mm and almost certainly were water deposited. The remainder of the fill (29) consisted of organic soils, the result of more gradual silting and erosion. Beyond the ditch on the eastern side of the road no features were visible in the original topsoil (46). Removal of this layer to the clay subsoil (26) revealed that features were present but that their fill was indistinguishable from the soil above. It is conceivable that archaeological features which cut into the topsoil but not into the subsoil may not have been recognised if their fill was nearly identical.

The base of a small sub rectangular pit (38) measuring 240 by 260 mm was located 2 metres east of the centre of the road side ditch. This feature contained a highly corroded fragment of an iron bar, rectangular in section and pointed, which remained nearly upright in the fill (39). It is tempting to interpret this feature as a post hole for estate fencing or fencing with iron posts. Evidence from historic photographs suggests that iron post and wire fencing was present on this side of the road (fig.3). Other documentary evidence referring to a 'very old iron fence' is indecisive. Care must be taken not to interpret the alignment of fencing from a single post hole. It is necessary to excavate further to locate a line of such post holes before any definite conclusions can be made.
The other feature located to the east of the roadway may only be described as a sub-circular, near vertical sided and flat based pit (36). Its fill (37) is homogenous and similar to the original topsoil. The pit measures c.700 mm diameter with a remaining depth of 350 mm (its total depth from topsoil may have been in the region of 650 mm). This pit may be associated with the presence of large sandstone blocks and fragmentary garden edging tiles in the fill of the road side ditch at this point. Further interpretation would be speculative but more extensive excavation may reveal important archaeological features to the south of trench 1.

The excavation revealed details of road construction and metalling. The surface of the road (27) consisted of clay, probably excavated from the road side ditches since its composition was similar to the subsoil, and a number of shallow deposits of lime mortar and crushed sandstone. It is surprising that the metalling is so shallow, averaging only 100 mm thick, and was placed upon the original topsoil (25). The road does not seem to be in a bad condition in spite of its insubstantial nature and the amount of traffic that it must have carried in the 19th century. However repairs may be indicated by the numerous lenses of clay, mortar, and sandstone.

*Trench 5 and field survey.* Trench 5 formed part of a field survey to locate surface remains of the approach road with the present park. The roadway is clearly visible in the
Beach Park as it crosses the creek. The original sandstone bridge abutments with provision for timber members survives as does the roadway as a raised embankment. The road turns from the bridge towards the junction of Olola Avenue and Wentworth Road. It was believed that the road was visible as a shallow depression or cutting to the south of Wentworth Road but to test this hypothesis a small trench was excavated, namely Trench 5 (fig.2). This excavation measured only 1 by 5 metres (5 sq. metres) but confirmed the alignment of the roadway. The western side of the roadway was excavated, metalling (57) in a similar stratigraphic position to that in trench 1 was located, but there was no indication of a ditch on this side of the road.

It may be concluded that historical and archaeological evidence combine to give an accurate delineation of the course of the approach road within the present grounds and park.

Access to the cellars, kitchens, stores, and stables.

Historical evidence. There is very little documentary evidence referring to the layout of access to the various outbuildings and offices associated with Vaucluse House. One important reference forms part of the lease of Vaucluse to John Hoskins commencing 24 December 1853: exceptions to the lease included 'the loft over the outer store near the kitchen and a right of way and access to such loft at all reasonable times in the day time'\(^{21}\). The door to the loft on the south side of this building (now the boardroom) still survives.
Cartographic evidence is also scarce although Higginbotham and Robinson's map of the Municipality of Woollahra, 1889, is again important (fig.2). Shown on this map is a copy of an accurate survey of the grounds and house at Vaucluse. The original has not been located but another copy also survives giving additional details. The approach road, entrance, fencing or walling, and buildings are delineated but the precise layout of metalled surfaces, roads and pathways is unclear. For the purposes of restoration it is important to determine the nature and appearance of the access to the service buildings, and to document the changes over time.

Historical photographs provide the most useful information, although detailed coverage is provided for only part of the area, namely the area to the east of the house and north of the stables (figs.7-9). The formalised turning circle and driveway present today give only a general indication of the older layout. Until the construction of the driveway from Olola Avenue in the early 20th century the approach road on reaching the house had branched into two parts, one leading to the main entrance, the other providing access to the east side of the stables. There also appears to have been 2 other road surfaces leading from the main entrance, one to the east of the stables, the other curving around towards the store. These two roadways were connected by another along the north wall to the stables. The roadways providing access to the store and loft above do not appear to have been heavily used: late 19th century
Figure 7. Late nineteenth century photograph of part of the turning circle at Vaucluse House (Vaucluse House Collection).

Figure 8. Late nineteenth century photograph of part of the turning circle and entrance to Vaucluse House (Vaucluse House Collection).
Figure 9. Early twentieth century photograph of the turning circle at Vaucluse House (Vaucluse House Collection).
photographs reveal that vegetation had grown over the road on the north side of the stables and a rustic pergola had been placed next to the other route on the east side of the kitchen.

Historic photographs provide little evidence for other areas, for example access to the west side of the stables or coach house, to the cellars and kitchens, and other areas. There are a small number of early 20th century photographs of the west side of the stables, but these either show the present concrete pathway, or its predecessor, a narrow bitumen pathway. It is interesting to note that the latter is laid in a wider cutting which may suggest the presence of an earlier roadway. Access to the coach house must have been directly from the turning circle or by the south end of the stables, but the situation is made unclear by the extent of modern landscaping.

Archaeological evidence. There remain some surface indications of metalled areas between the store (boardroom) and the stables. Directly to the east of the store the turf is raised up suggesting the presence of a roadway from the turning circle to the south end of the store. The present set of gates at this point may testify to previous access into the now walled off yard between the kitchen and creek. (In order to avoid confusion it should be noted that the walls at present adjoining the store are 20th century additions and do not appear to follow earlier boundaries.) The detailed 19th century plan of the grounds (Higginbotham and
Robinson, 1889) complicates the problem of access by showing a gap in the walling or fencing on the west side of the yard, possibly denoting access from the west side of the creek.

Trench 8. Thus apart from establishing the nature and layout of any metalling near the kitchen and cellars the question of the original route of entry remains partially unanswered. From historical evidence already discussed access between the store and the lean-to building housing the larder and dairy seems less likely than the alternatives. To confirm this situation and to assess the general nature of the archaeological deposits within this walled yard area trench 8 was excavated (fig.10).

Footings. A trench, 1 metre wide and c.4 metres long, was first excavated between the larder and dairy building and the store (boardroom) but did not extend to the wall of the former because of the presence of flagstone paving. This trench revealed the footings of a small building butt jointed onto the present north wall of the store. These footings are of coursed random rubble (sandstone) bonded with lime mortar, but survive only to a shallow depth, up to 400 mm; they were not sunk into Foundation trenches but bedded directly onto the sandy subsoil (121). Furthermore these footings may be divided into two parts, separated by a distinct straight joint. The first (107), butting the store, extends up to 2.4 metres from this building, the second (108) forms a small addition on the north side of the other footings and measures 1.2 metres wide by more
Figure 10. Trench 8. Three successive plans of archaeological features in trench 8. Plan 1 indicates the earliest features, plan 3 the latest.
than 1.2 metres long (not fully excavated).

The type of joint between these footings need not indicate progressive additions, since the superstructure may have been properly jointed. Thus it is not clear whether this structure was contemporary with or later than the 'splendid suite of outbuildings' which W C Wentworth commissioned in 1829\textsuperscript{25}. This and other additions to the store are shown on architectural plans from 1918 to 1960, but were probably demolished in the early 20th century\textsuperscript{26}. Further research in the Minute Books of Trustee's meetings may provide a more accurate date for demolition.

There is little documentary evidence to interpret these footings. The remaining north wall of the store has been recently rebuilt, obscuring all but a few details of the original structure. However there is some evidence of a lean to roof. The north wall of the store incorporates a fireplace and chimney. The back of this fireplace appears to have been blocked and may originally have connected with the excavated structure. Tentatively therefore it is suggested that the footings represent the remains of a bread oven or some similar feature.

Access. The remaining gap of c.1.5 metres between the footings attached to the north wall of the store, and the dairy/larder building confirms the absence of access by wagons or carriages between these two buildings. However a
pathway may have been present. The survival of flagstones against the south wall of the dairy and larder leading towards the east side of the store supports this view. However the presence of a service trench (89) carrying stormwater and water mains beneath the flagging suggests that the latter was either relaid or of late 19th, early 20th century date (salt glazed ceramic pipes with collar and cylinder made in the mould may be dated 1880s to 1940s). There is no indication of a metalled surface beneath the flagging.

**Extension of trenches.** Trench 8 was extended in a westerly direction to expose more fully the footings already described, and in addition to test the archaeological stratification across the year area. Originally it was intended to excavate a larger trench or series of trenches but once the depth of stratification had been established it was decided to delay further excavation until funding was available to open up a larger area thus allowing a full understanding of the stratigraphy and archaeological features.

**Metalled surfaces.** The extension of trench 8 measured 1 metre wide by 7.8 metres long and was excavated to a maximum depth of 1 metre, the level of the present water table (figs.10,11). Under the topsoil and turf restricted areas of bitumen (82) were exposed, probably associated with structures denoted by post holes (86,124). The limited size of the trench restricted interpretation of these features but it is tentatively suggested that the bitumen
Figure 11. Sections 12, 14 and 16, Trench 8.
sections 12, 14 & 16
represents part of a network of pathways, each c.1.2 metres wide, which crossed the courtyard. Bitumen does not appear to have been used extensively at Vaucluse until the 20th century. The earliest photographs of the garden to the north of the House which show pathways with a bitumen surface date from 1918-1924.

Below the bitumen a more extensive area of gravel and clay metalling (81) was exposed, commencing c.2 metres west of the footings already described (107,108) and continuing along the trench for another 5.4 metres. The metalling was substantial with a thickness of 100-150 mm, and although its extent within the courtyard is unknown, its presence indicates that vehicular access was possible.

It is difficult to accurately date the laying of this surface other than to state that it is contemporary with the buildings still standing today. Incorporated within and cutting through this surface are a number of iron water pipes and service trenches, the earliest of which may date to the latter half of the 19th century. Artifactual material is also of limited use; small samples and materials that cannot be closely dated (also contamination from later deposits) restrict interpretation. A date range of middle to late 19th century is the closest that can be established in the absence of other historical documentation.

Fill layers and other structures. Beneath the metalling a series of rubble and sand fill layers were located (100,104, 109,110, 123 in fig.11). These infilled a large depression
(103) which appears to have been scoured out by the neighbour­ing small creek. Due to the height of the water table it was not possible to fully excavate this large feature.

Incorporated within these fill layers (cut into 104, but predating 100) the corner of a structure consisting of roughly hewn sandstone blocks, partly bonded with clay (114), was discovered. Since only a very small portion of this structure was located, it is impossible to state whether or not it formed part of a building: it may be part of a revetment wall or similar feature. No secure date can be given because of the unreliability of small artifactual samples. From stratigraphic evidence and the dating of the metalled surface (81), it may be assumed that this structure belongs to the first half of the 19th century. Further excavation is required to elucidate the significance of this sandstone walling and to obtain larger artifactual samples for dating purposes.

**Early 19th century buildings.** Some consideration needs to be given to the possibility that this feature (114) and other artifacts indicate the presence of buildings, not now standing, which predate the present house and outbuildings. There are numerous historical references, both documentary, cartographic and pictorial, to a house, detached kitchen, store and farm buildings, built between 1803 and 1805 by Sir Henry Browne Hayes (1762-1832) on or near the present site. The house was built of stone, probably of 2 storeys, or at least with attic rooms, had 8 rooms and was
considered 'very roomy and finished in the highest style'. Various improvements may have been made between the time of its construction and its purchase by W C Wentworth in 1827. It is believed that the external walls of this house now form the drawing room of the present mansion.

Thus it is possible that the earliest features in trench 8 belong to the period 1803-1827, and this may include the sandstone walling (114) already discussed. The presence of a number of fragmentary, crudely made and poorly fired sandstock bricks, without frogs, in several of the trenches clearly signifies early building activity prior to 1820. Currently no structural brickwork of this period has been located.

Other archaeological trenches

Further archaeological trenches were excavated, namely trenches 2, 2a, 3, 4, 7 and 9 (fig.2). These were designed to answer specific questions relating to the following subjects:-

1) soil levels surrounding the house.
2) the dating of the drainage system on the east wall of the kitchens.
3) the recording of archaeological evidence prior to and during restoration.

These trenches will not be extensively discussed below, but full and detailed descriptions appear in the archival report.
With the removal of 20th century garden beds on the north and west verandah of the house it was necessary to determine the levels of topsoil present in the 19th century (trench 2,3,4). Only limited historic photographic evidence is available and furthermore it proved difficult archaeologically to determine levels of topsoil. Generally it is difficult to differentiate between layers of dark humic soil especially when components and consistence are similar. This problem was generally overcome by relating stratification to structural features: for example, the preparation of sandstone blocks or the quality of walling may indicate whether a structure was meant to be visible, or buried.

The drainage system (68) along the east wall of the kitchen was of relatively modern construction (trenches 7 and 9). Concrete slab, dry pressed brick, cement mortar, cement rendering and saltglazed ceramic pipe (collar and cylinder manufactured in one piece) clearly indicate a 20th century date (1920-1940?). Thus this work must have been approved by the Trustees and further research in the Minute Books may provide a more accurate date.

Three trenches (2,2a,3) were excavated primarily to record archaeological information uncovered during restoration. This evidence would not otherwise have been recorded according to the principles of ICOMOS\textsuperscript{35}. Information on the construction of the verandah, and levels of garden soil would have been lost, and the location of a sandstone box drain would not have been recorded in detail.
Sandstone drains. Trenches 3, 7 and 9 uncovered evidence of sandstone box drains contemporary with the construction of the house and outbuildings, 1829-40 (fig.12). These were constructed of quarry blocks (hammer blocked), the largest of which measured 900 mm long, 500 mm wide, and 300 mm thick. The example in trench 3 (44) ran under the footings of the verandah and served to carry away stormwater from the roof. It is believed that this box drain turns into a rubble drain a few metres from the house.

Excavations on the east wall of the kitchens revealed another sandstone drain (74, 1371 without capping stones, predating the present drainage system (trenches 7, 9). This example appears to have been open, and may have collected stormwater from the eaves of the kitchen roof. Further excavation is necessary to determine whether this drain formed part of a more extensive system including the stables block, and also to locate its exact course and outfall to the north of the kitchen. It is clear that the invert level decreases towards the north but whether or not there is any connection with the drainage of the courtyard, and drains under the long gallery is unknown.

Pathways in the pleasure garden. Trench 6 was excavated and sites 10 to 12 recorded to determine the course and construction of pathways in the pleasure garden to the north of the house (fig.2)36.

Trench 6 was located on the presumed course of the
Figure 12. Trenches 2, 3, 7 and 9, and Sections 11 and 17, indicating locations of the two sandstone drains.
verandah, NW

drain, 44

KITCHEN

drain, 74, 137

trenches 2, 3, 7 & 9

sections 11, 17
pathway from the steps on the west side of the verandah to the pathway circling the fountain. The excavation revealed no evidence of a pathway. Either all remains of this had been removed, or a pathway had never existed at this point. The former is unlikely since archaeological stratification revealed little evidence of substantial disturbance. It now appears likely that the pathway from the west steps, immediately to the north of the present entrance, led more directly to the creek or canal, before turning north to join up with its counterpart circling the fountain lawn.

While work was in progress removing the concrete slab pathway circling the fountain garden to the north of the house, details of earlier pathway construction were recorded (sites 10,12). At site 10 an asphalt pathway, bordered on its inner edge with a sandstock brick gutter, was revealed. From historic photographs it is known that this brick gutter circled the fountain garden from its south eastern corner to site 10. No recording of earlier metalling was undertaken since this would have involved destruction of the asphalt pathway. However at site 12 the situation was different. The brick gutter was absent and the bitumen pathway was mostly broken up, revealing an underlying layer of clay. This latter may have formed the original pathway, or a prepared bed for the asphalt. The latter was bordered on its outside edge with a single row of sandstock bricks on edge.

As a comparison with the pathway bordering the fountain
garden, another pathway, one within the shrubbery or pleasure garden itself (site 11) was inspected. With the removal of the concrete slab, a layer of cinder was revealed overlying sandstone rubble in a clayey sand matrix. It is unclear whether either of these layers constituted earlier pathways but the general sequence of construction may be further elucidated by historical evidence.

Historical photographs cover a very limited area with regard to pathway construction, namely the area immediately to the north of the house. If one can rely on the dates given for some of the photographs within the Vaucluse House Collection then the following sequence can be established:

- By 1918. Asphalt pathways.
- 1926. Construction of cement pathway around fountain garden.

This sequence is confirmed by documentary evidence, since the Minute Books refer to the approval of work to replace the 'tarred pathways' with cement in 1925.

It is relatively difficult to give a reasonably firm date for the construction of the garden pathways. From pictorial evidence there seems to be little plant growth associated with the pleasure garden in 1840, but by the early 1850s this area was firmly established. It is
likely that metalled pathways would have been provided for this garden by 1850, and this is confirmed in a letter from John Alexander, agent, to W C Wentworth in 1855, as follows: 'I saw three men working repairing the walk of the plot immediately north of the house which had been injured by the late great rains.'

Discussion

This report has been concerned with excavations and archaeological evidence in the immediate vicinity of Vaucluse House. This is understandable in terms of the restoration programme for the house itself, but when the focus is changing towards the restoration of the 19th century character of the gardens and grounds there is greater need to study all that remains of W C Wentworth's estate at Vaucluse. Without studying the relationship of the house to its estate, and without research into the economic and historic context of Vaucluse, a full understanding of the existence and survival of the house cannot be obtained. Furthermore garden restoration will undoubtedly disturb archaeological relics within the remaining park, and without detailed archaeological research and survey such restoration will be relying on only a very meagre portion of the available evidence.

In order to indicate the importance of further archaeological studies for the current restoration programme, some preliminary results will be described below. The following questions have been considered and should receive full and detailed treatment in future:
1) the significance of the visible archaeological remains within Vaucluse Park.

2) access routes within the estate at Vaucluse.

3) the general significance and the management, organisation and husbandry of W C Wentworth's estate at Vaucluse.

4) the contribution of the farms at Vaucluse to the agriculture and economy of New South Wales from the beginnings of European settlement to c.1900.

Visible archaeological remains. Preliminary examination of aerial photographs, both oblique and vertical, has revealed a large number of soil or crop marks and other anomalies. In some cases these have also been recognised during field survey. The results are plotted in figure 2. Also reproduced in this figure are the buildings and fence lines shown on Higginbotham and Robinson's map of 1889. The close fit of this survey with features visible from aerial photographs is remarkable. Little interpretation of this evidence has yet been undertaken, but from historical documentation already collected and from field survey it will be possible to identify with some certainty some of the historic features. These may include the locations of kitchen gardens, orangeries, vineyards in addition to various outbuildings such as fruit stores, greenhouses, the garden house, and cottages. The garden to the south east of the house, known as the south paddock may already be identified as the one cultivated in the early 19th century. Crops were grown in the paddock to the north.
west of the house during the occupancy of the Wentworth family. The identification of vineyards and orangeries is more difficult and requires further research, as does the question of changes in cultivation and husbandry. It is important that such studies be undertaken so that restoration is based upon reliable evidence.

Access routes. The approach road described earlier in this report was not the only access to the estate, but in fact there were a number of routes (fig. 1). The approach road to Wentworth's house, which served from the 1830s, superseded an earlier route from Old South Head Road which was constructed by Sir Henry Brown Hayes in 1812. This earlier route may also have superseded another road from the lighthouse on Old South Head Road to the 80 acres of land granted by crown grant to Thomas Laycock on 25 February 1893. Other evidence has been gathered from several historic maps, plans and sketches, the results being shown in figure 1. It is interesting to note that the approach road may not have originally followed Vaucluse Road but may have taken a lower route, nearer the harbour, and joined New South Head Road at Rose Bay. This harbourside route is shown on maps of the 1830s and 1840s as a 'bridle road', and is mentioned in correspondence between members of the Wentworth family. It was clearly old and presumably out of use by the 1850s. The main gates to Vaucluse were originally placed opposite the entrance to Greycliffe at the junction of the bridle road and Vaucluse Road.
Further detailed cartographic research may provide additional important information on the period of use and significance of each route. For example, figure 1 is still incomplete since the road to the vault and headland beyond has not yet been identified on any map but does appear on historic photographs.

**Economic importance of Vaucluse, and estate management.**

Preliminary analysis of historical documentation indicates that the late 18th and early 19th century farms, which were later to form Wentworth's estate, made little impact on the economy of New South Wales. Nearly 40 hectares (100 acres) was cleared by 1803, and possibly an additional 12 hectares (30 acres) by the 1820s. Until improvements, including a house, garden and orchards, were carried out by Sir Henry Brown Hayes, the estate was considered a wasteland.

From 1815-1827 Vaucluse was mostly unoccupied and untenanted.

Substantial changes were made when W C Wentworth purchased Vaucluse in 1827. In spite of this, Wentworth's wealth was based on the productivity of stations in western New South Wales, and Vaucluse appears to have been managed in such a way as to provide for domestic requirements, with surplus produce being sold on the local market. Further historical research may indicate more intensive production during the period of Wentworth's occupancy, 1827-1853, and has already provided information on staff and management.

Finally, the significance of some terms consistently used in correspondence of the Wentworth family should be
discussed, namely the terms Vaucluse within the fences and outside the fences. It is clear that the fence in question was the boundary fence that ran from the head of Parsley Bay in a southerly direction, beside a reserved road, to the corner of the original crown grant of 40 acres to Francis McGlynn. From here it ran along the southern boundary of this grant and then in a south west direction to the harbourside at Milk Beach (fig.1). This boundary is shown in part on a small number of historic maps.

In total 167 hectares (363 acres) was enclosed, and it was within this boundary that stock was allowed to graze on partially cleared land. It should be noted that this area also included gardens and land under arable cultivation. This figure is certainly significant in discussions of the economic value of the estate. The remaining 40 hectares (100 acres) were unfenced and was not available for pasture. Indeed the bushland outside the fences was considered as 'an ornament and protection to Vaucluse' and great effort was expended to keep the boundaries in good repair. This latter is certainly an indication of the priorities of the Wentworth family. Rather than its economic value its importance lay in its location. Vaucluse was only one of a number of harbourside residences for wealthy citizens who could afford to live a healthy distance from Sydney, but close enough to travel for important business.

Conclusion

Prior to archaeological works at Vaucluse House, the Historic Houses Trust had underestimated the role of
Historical Archaeology in their restoration programme. This report has certainly provided detailed information on those problems tackled the excavation. However it is hoped that the discussion above has indicated the potential of Historical Archaeology to provide evidence which may influence basic proposals for restoration, and furthermore make an all important contribution to the interpretation of Vaucluse House in its historic environment.
NOTES


11. Higginbotham, E. A. K. 1983. The Restoration of Vacluse House; Sydney, N.S.W. Report on Recent Excavations in 1982. Historic Houses Trust, N.S.W., archival report. This archival report is available for consultation at the Historic Houses Trust, Sydney,
the Heritage Council of N.S.W., Sydney, the Heritage Commission, Canberra, the Mitchell Library, State Library of N.S.W., Sydney, and the Fisher Library, University of Sydney.


13. The historic photographs discussed are included in the *Wentworth Papers*, Mitchell Library, A1441, 927-931.


15. Hughes, J. op.cit., 8,15.

16. ibid. 15,61a.

17. ibid.11.

18. ibid.1.

19. The earliest map to show the route of the approach road via Vaucluse Road is dated to 1838, namely Bemi; P. loc.cit.


26. Government Architects Branch, Department of Public Works, N.S.W.

27. Various photographs, Vaucluse House collection.

28. Evidence for dating the metalled surface (81) is outlined below. Archaeological stratigraphy (fig.11) indicates that the metalling postdates the construction of the various outbuildings, which may be dated to 1829. Various features cut into or are incorporated within the metalling, including service trenches (96,117) and water pipes (99). The earliest ceramic pipes with collars moulded separately (98) may be dated prior to c.1880 when more sophisticated manufacturing processes were adopted. No research has been undertaken to date the general appearance of iron water pipes but certain historical references to water supply may be significant. These latter date from 1868 to the 1870s (ibid.14,34,35) although the introduction of the water supply may have been part of general improvements in 1861, 1862 (ibid.10,30-32).
Artifactual material from earlier layers tends to suggest a mid to late 19th century date.


30. Hughes, J. op.cit., 92,93,150-152.

31. Descriptions of the house become more and more elaborate (ibid.150-152). Maurice O'Connell (1768-1848) appears to have made substantial improvements (ibid.93).


33. Quantities of this brick have been found in various contexts and trenches. Artifact nos.139-146 in contexts 16 (trench 2,2a), 50 (trench 4), 84,109,111, 123 (trench 8).

34. Higginbotham, E A K, op.cit.


37. Various photographs, Vaucluse House collection. Photographs are contained within bound volumes with typewritten captions.


39. Department of Public Works. op.cit. 16,19.

40. Hughes, J. op.cit.1.


42. Higginbotham and Robinson. op.cit.

43. Surveyor General. loc.cit.

44. Department of Public Works. op.cit.17.

45. Hughes, J. op.cit.93.

46. ibid. 44.

47. Bemi, P. op.cit. Also Lyons, S. op.cit.

48. Hughes, J. op.cit. 13,22,44.

49. ibid. 99, John Hosking had built Carrara across the course of this road by 1856-1858.

50. ibid.13,22,66-68.

51. ibid.93,150,151.

52. ibid.98,150.

53. ibid.93.
54. ibid. 112.
55. ibid. passim.
56. ibid. 2, 15, 61, 99.
57. Registrar General, N.S.W. loc. cit.
58. Surveyor General. op. cit. 1832. Archives Office of
    N.S.W. X752. No. 55, also 1836, AONSW X753. SB. 35. V3:
    Berni, P. op. cit.: Higginbotham and Robinson. op. cit.
59. Hughes, J. op. cit. 74.
BIBLIOGRAPHY

Published sources.


Unpublished sources.


Department of Public Works, N.S.W. 1981. *Vaucluse House garden development*.


Historic Houses Trust, N.S.W. 1982. *Vaucluse House garden and park conservation plan*.

Hughes, J. 1982. *Vaucluse House, report on select list of manuscripts*, Historic Houses Trust, N.S.W.

Surveyor General: Surveyors' sketch books, parish of Alexandria, Archives Office of N.S.W. 1832? X752.no.55.

_____ X753.SB.35.V3.

_____ 1836.X753.SB.42.V3.


Newspapers.

Illustrated Sydney News, 27 October 1869. 281.

Maps and Plans.


Parish of Alexandria, County of Cumberland. 1871. Mitchell Library.

Registrar General, N.S.W. DP937589, Land Titles Office, Sydney.

_____ DP60187.

Trigonometric Survey of Port Jackson. 1828?, Archives of N.S.W. AO. Map 4752.
APPENDIX 1. LIST OF ARCHAEOLOGICAL CONTEXTS, CONTEXTS CONTAINING ARTIFACTS, AND ARTIFACT DESCRIPTIONS.

The term 'context' is used to describe each unit within an archaeological excavation whether it is a layer, feature, or structure.

Full descriptions of each context, complete lists of artifacts found within each context, and descriptions of artifacts are held by the author (context record, context find record, and artifact record sheets).

Context record.

1. trench 2a layer
2. layer
3. layer
4. layer
5. layer
6. layer
7. layer
8. layer
9. trench 2,2a structural, wall
10. layer
11. trench 2 layer, same as 012
12. structural, concrete, same as 011.
13. trench 2,2a structural, sandstone flags
14. trench 2 structural, garden wall
15. structural, concrete slab pathway
16. trench 2,2a layer
<table>
<thead>
<tr>
<th>Layer Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.</td>
<td>layer</td>
</tr>
<tr>
<td>18.</td>
<td>trench 2 layer</td>
</tr>
<tr>
<td>19.</td>
<td>layer</td>
</tr>
<tr>
<td>20.</td>
<td>layer</td>
</tr>
<tr>
<td>21.</td>
<td>layer</td>
</tr>
<tr>
<td>22.</td>
<td>layer</td>
</tr>
<tr>
<td>23.</td>
<td>layer</td>
</tr>
<tr>
<td>24.</td>
<td>trench 1 layer, topsoil</td>
</tr>
<tr>
<td>25.</td>
<td>layer, old land surface, same as 046</td>
</tr>
<tr>
<td>26.</td>
<td>layer, subsoil</td>
</tr>
<tr>
<td>27.</td>
<td>layer, road metalling</td>
</tr>
<tr>
<td>28.</td>
<td>roadside ditch, east</td>
</tr>
<tr>
<td>29.</td>
<td>fill, part of 028</td>
</tr>
<tr>
<td>30.</td>
<td>pipe trench</td>
</tr>
<tr>
<td>31.</td>
<td>fill, part of 030</td>
</tr>
<tr>
<td>32.</td>
<td>iron water pipe, part of 030</td>
</tr>
<tr>
<td>33.</td>
<td>tap stand, remains</td>
</tr>
<tr>
<td>34.</td>
<td>brick, part of 033</td>
</tr>
<tr>
<td>35.</td>
<td>iron piping, part of 033</td>
</tr>
<tr>
<td>36.</td>
<td>pit</td>
</tr>
<tr>
<td>37.</td>
<td>fill, part of 036</td>
</tr>
<tr>
<td>38.</td>
<td>post hole?</td>
</tr>
<tr>
<td>39.</td>
<td>fill, part of 038</td>
</tr>
<tr>
<td>40.</td>
<td>iron bar, part of 038</td>
</tr>
<tr>
<td>41.</td>
<td>trench 3 layer</td>
</tr>
<tr>
<td>42.</td>
<td>layer</td>
</tr>
<tr>
<td>43.</td>
<td>layer</td>
</tr>
<tr>
<td>44.</td>
<td>structural, sandstone box drain</td>
</tr>
<tr>
<td>45.</td>
<td>fill, part of 044</td>
</tr>
</tbody>
</table>
46. trench, 1 layer, same as 025
47. trench 4 layer
48. layer
49. layer
50. layer
51. fill, part of 054
52. fill, part of 054
53. pit or post hole, for flagpole
54. layer, same as 054
55. fill, part of 054
56. layer, topsoil
57. pipe, iron, part of 069
58. iron pipe, part of 069
59. layer, same as 063
60. trench 6 structural, fill, part of 066
61. trench 6 structural, wall footings
62. layer, same as 064
63. layer, same as 064
64. trench 5 layer, road metalling
65. layer, same as 058
66. pit or post hole, for flagpole
67. layer
68. trench 7 open drain
69. layer, same as 069
70. sandstone open drain
71. layer
72. layer
73. layer
74. layer
75. fill, part of 074
76. layer
77. layer
78. trench, linear, for drain
79. pit?
80. trench 8 layer
81. layer
82. layer, asphalt
83. stone setting
84. layer
85. layer
86. post-hole
87. fill, part of 086
88. layer
89. linear trench
90. fill, part of 089
91. pipe, part of 089
92. pipe, part of 089
93. linear trench
94. fill, part of 093
95. electric wiring, part of 093
96. linear trench
97. fill, part of 096
98. ceramic pipes, part of 096
99. iron piping
100. layer
101. pit
102. fill, part of 101
103. large depression
104. fill, part of 103
105. fill, part of 117
106. pit
107. structural, sandstone footings
108. structural, sandstone footings
109. fill, part of 103
110. fill, part of 103
111. fill, part of 106
112. ceramic pipe, part of 089
113. cement capping, part of 089
114. structural, wall footings, part of 115
115. foundation trench
116. fill, part of 115
117. linear trench
118. fill, part of 117
119. ceramic pipe, part of 117
120. layer
121. layer
122. fill, part of 089
123. layer
124. post-hole
125. post-pipe, part of 124
126. post-packing, part of 124
127. pit
128. fill, part of 127
129. fill, part of 103
130. trench 9 layer
131. fill, part of 137
132. pipe, part of 130
133. pipe, part of 130
134. cement
135. ceramic pipe
136. trench for drain
137. sandstone open drain, part of 136
138. layer

139-146. are artifact numbers.
147. trench 10 concrete slab
148. bitumen
149. bitumen
150. trench 11 concrete slab
151. cinder
152. metalling
153. layer
154. trench 12 concrete slab
155. layer
156. bitumen
157. layer
158. not used
159. not used
160. not used

Context find record.

Context 016, 027, 029, 037, 040, 045, 046, 050, 069, 080, 081, 084, 085, 088, 102, 104, 109, 111, 123, 130.

Artifact recording sheets.

Artifact nos.139-142. Nos.143-146 not used.
APPENDIX 2. NOTES ON ARCHAEOLOGICAL TRENCHES.

Trench 2,2a, Section 2.

Retaining wall for verandah (9) and sandstone flagstones (13). Fill layers (1-7,10) behind retaining wall. Concrete reinforcement (12) to retaining wall. Modern garden soils (19-22). Garden retaining wall (14) resting on concrete slab (15) of 20th century pathway. Disturbed natural soils (16,17) containing fragmentary sandstock bricks (up to 1820s).

Original level of garden soil abutting verandah (9) is not visible, but the level of the subsoil (16,17) and the preparation of the sandstone blocks of the verandah (9) in plainwork, indicates that the level of topsoil in the 19th century lies within the boundaries of context 21.

Trench 4, Section 8.

Verandah flagstones (13) and concrete reinforcement (12). Recent topsoils (47,51). Flagpole (53) in concrete (52). This flagpole was certainly erected in the 20th century and is visible on a few photographs in the Vaucluse House Collection. Introduced soil layer (48).

Note how layer 50 is truncated by recent activity and the space infilled by soils 47, and 48. This activity may be associated with underpinning (12).

Natural soil profile (49,55). Disturbance (50) containing early sandstock brick fragments (up to 1820s).
TRENCH 2, 2a. section 2.

TRENCH 4, section 8.
The nineteenth century ground level is not recognisable by stratigraphic means alone. Absence of substantial footings tends to suggest that the present ground level approximates that of the nineteenth century.

Trench 5, Section 9.

Topsoil (56), road metalling (57), earlier topsoil (58), subsoil and clay (59, 60).

Trench 6, Section 10.

Datum line, parallel with north side of verandah, and 9.9 metres from N.W. corner of verandah to trench 6.

Recent garden wall (61) and footings (62). Recent garden soil (63) and infill of garden bed (64). Natural soil or redeposited soil (65) infilling depression (66). Natural subsoil (67).

Had any pathway existed in this area then archaeological remains would have appeared at the junction of layers 63 with 65, or 67.