AN ARCHAEOLOGICAL INVESTIGATION OF STRUCTURAL FEATURES AT WATERHOF, HOF STREET: CAPE TOWN

Prepared for

Trevor Thorold Architects

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Prepared by

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1. INTRODUCTION

This is the second archaeological investigation to be carried out at Waterhof (Figure 1). Whereas the initial project uncovered a set of steps leading to the adjacent property[1], the current investigation has been designed to provide information about original elevations of surfaces in the gardens to the north of the house, as well as to try and relocate a water furrow and associated features, which are shown on early plans of the property. A small amount of additional work was again conducted in the area of the steps to determine the extent of additional structural features, and work has also been done in the rear courtyard of the house to determine the nature of structural remains relating to the long demolished outbuildings.

We have been slightly limited in some instances from fully understanding some features as we did not wish to enlarge holes to such an extent that the garden was heavily impacted.

As with the previous investigation we have relied on the background archival work prepared for the client[2]. This includes several early plans as well as photographs of the house and surrounds in the latter part of the 19th century.

2. ARCHIVAL EVIDENCE

Three plans are reproduced showing features which are the subject of this report. An excerpt from the Snow Survey of 1862 (Figure 2) shows what appears to be a structure adjacent to the steps that were uncovered earlier in the year. It is tempting to suggest that marks on the western side of the feature represent a doorway, but lack of similar detail on any other building would seem to discount this. It is interesting to note that this structure is not present on later plans. This implies that either the structure was demolished shortly after the Snow survey, or that the building was of such insignificance that it did not feature on later plans. This however seems unlikely and the former explanation is more plausible. Outbuildings to the west of the main house are also shown on this plan while the Thom drawing of 1899 (Figure 3) also shows the outbuildings and modifications which resulted from the subdivision of the property.

An excerpt from a plan of 1874 (Figure 4), shows very faintly the location of a water channel and storage “cask” which also appear on another plan (Figure 5). No structural features apart from the steps and retaining walls are shown on early plans of the terraced area to the north of the house.

3. RESULTS

A number of areas were selected which were believed to offer the greatest chance of providing the information that was needed. These areas were selected in consultation with the architect. Areas selected for testing are shown on Figure 6. While artefactual material has been found in most of the holes, it has usually been contained within soils of doubtful provenance and is not *in situ*. As such we cannot rely on the artefactual material to provide us with conclusive dating material.

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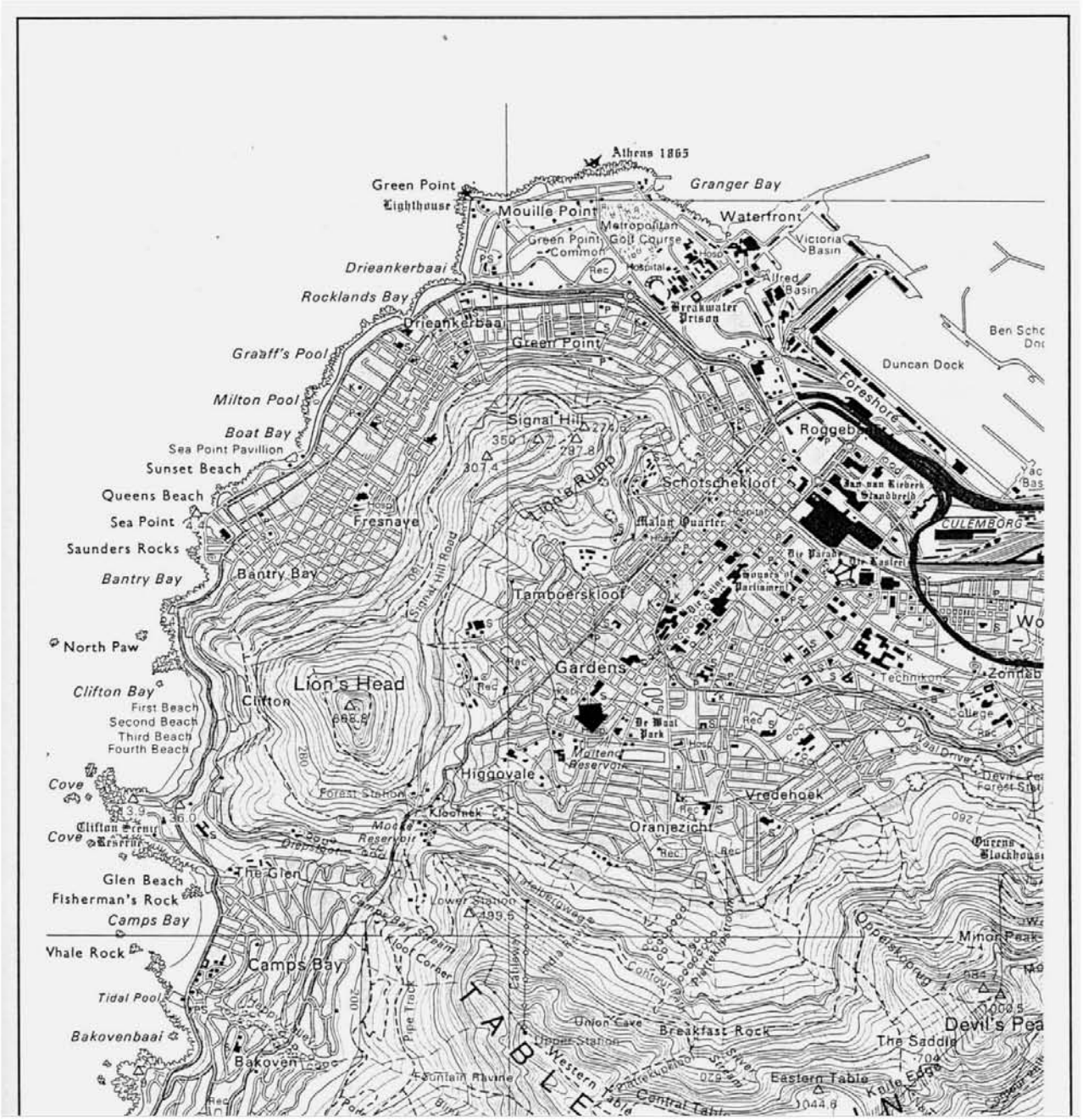
[1] Halkett, D. 1998. A phase 1 archaeological investigation of portions of Waterhof, Hof Street, Cape Town. Unpublished report prepared for Trevor Thorold Architects. UCT: Archaeology Contracts Office.

[2] A full archival study has been undertaken by Dr. Stuart Harris and is compiled in 2 volumes.



Location of Waterhof

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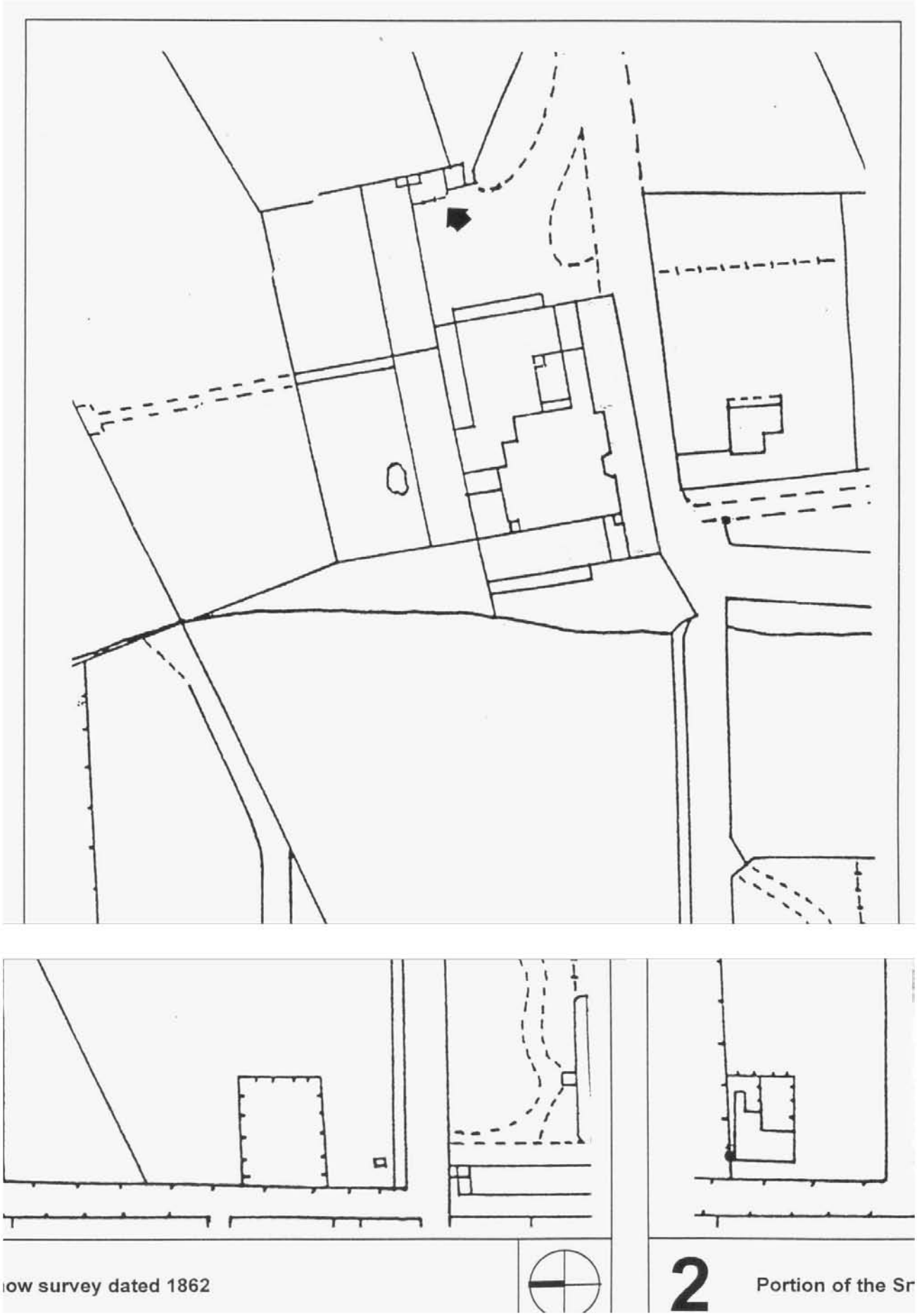

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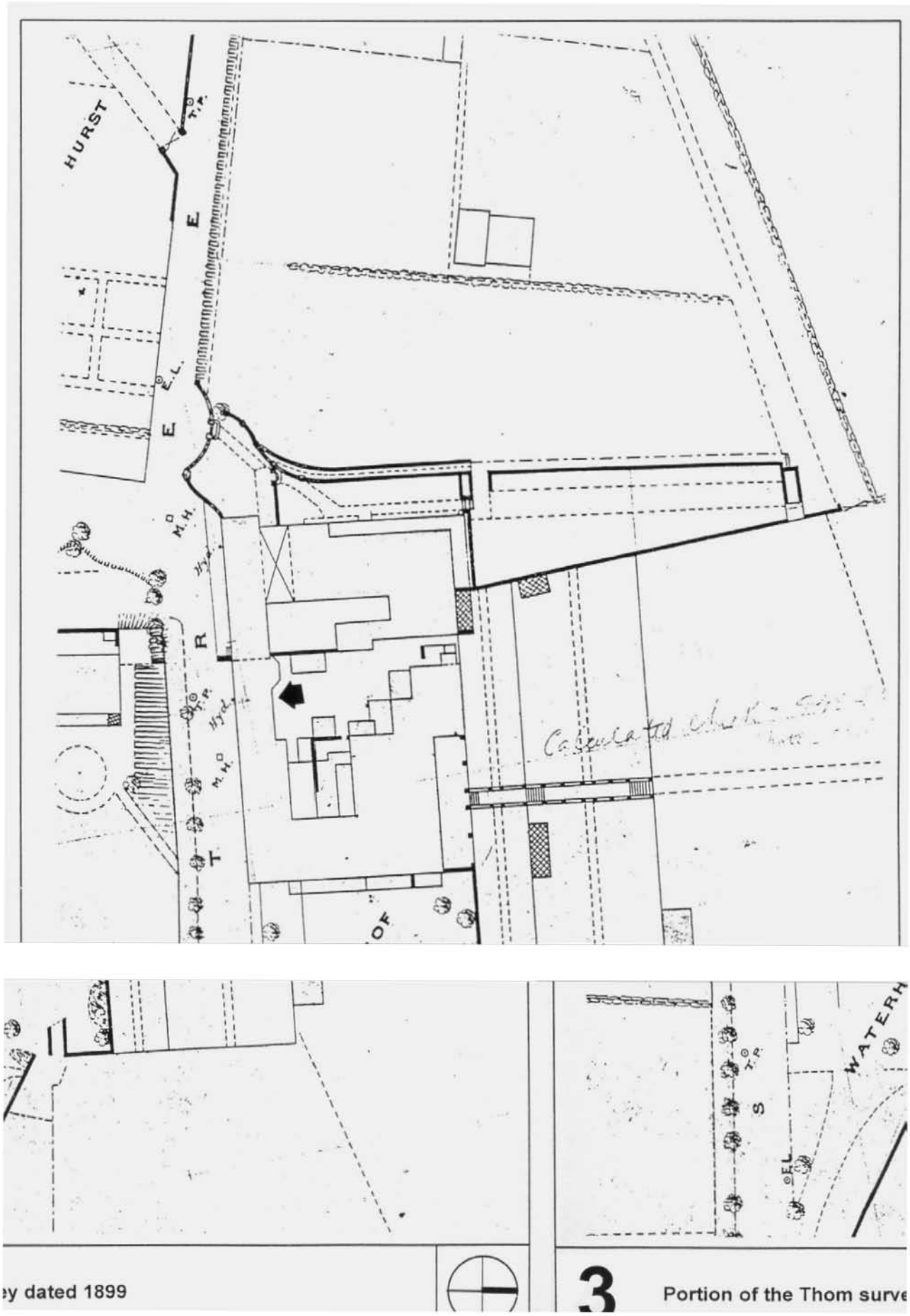

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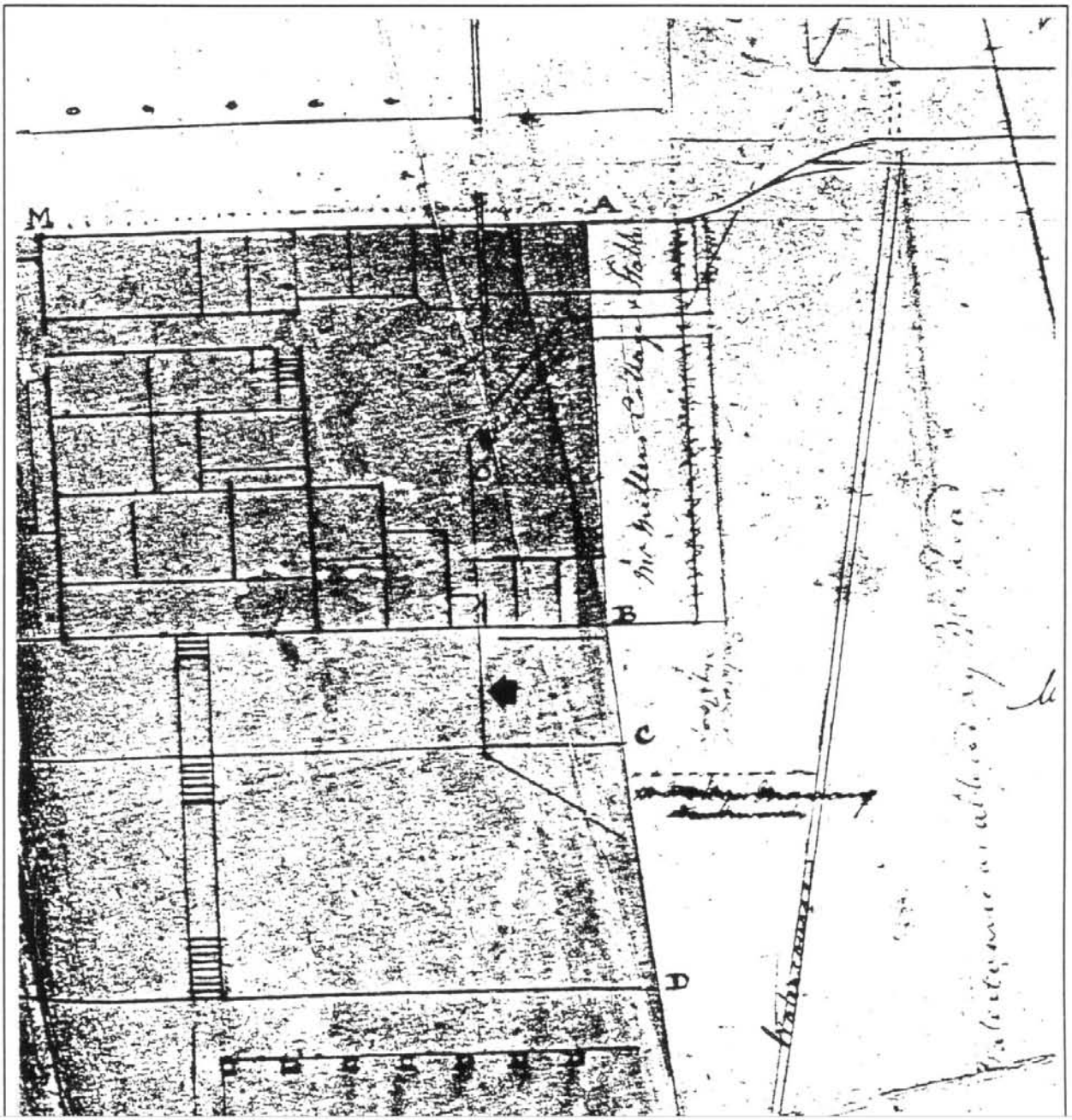

4 Portion of a plan dated 1874

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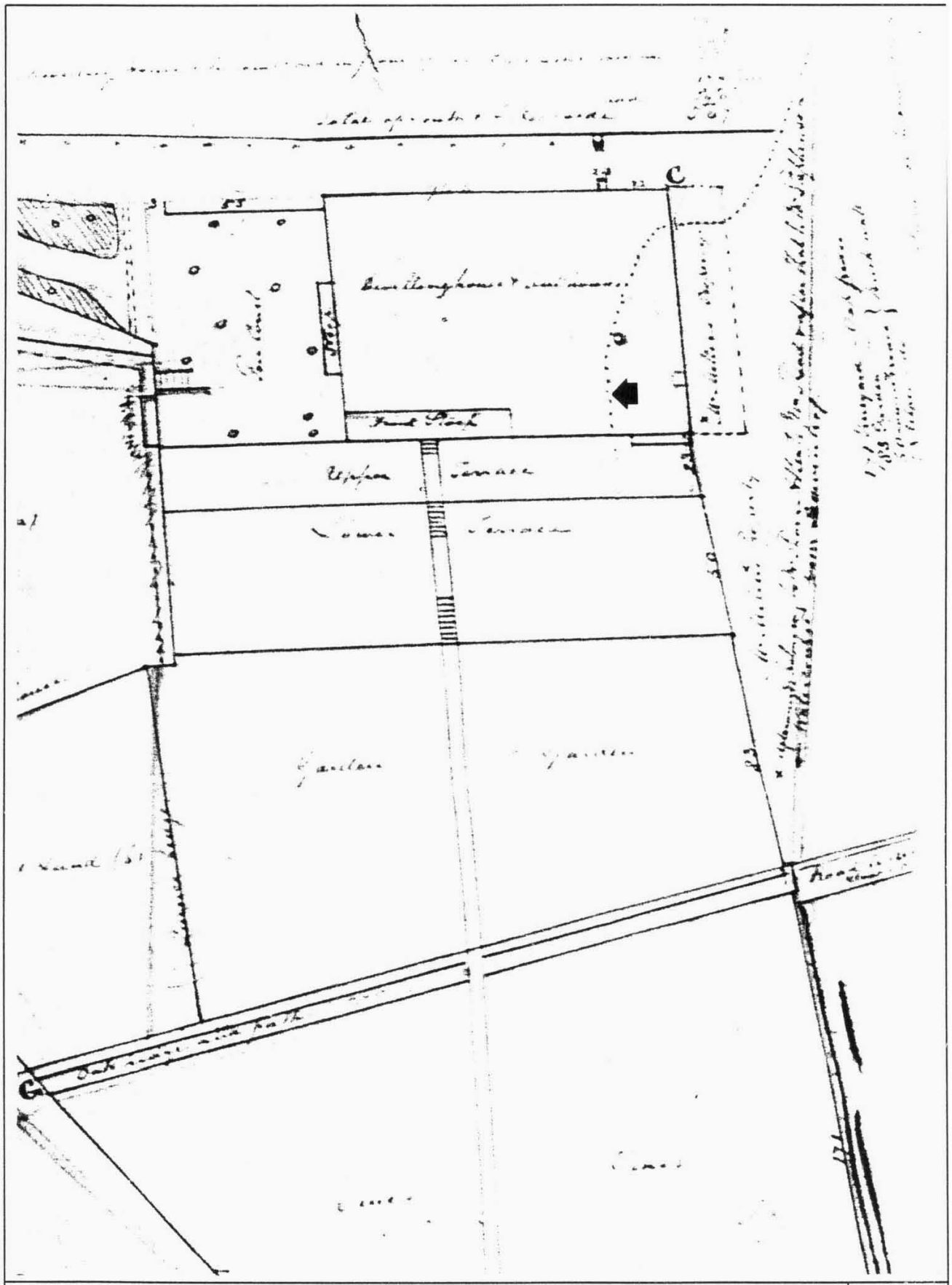
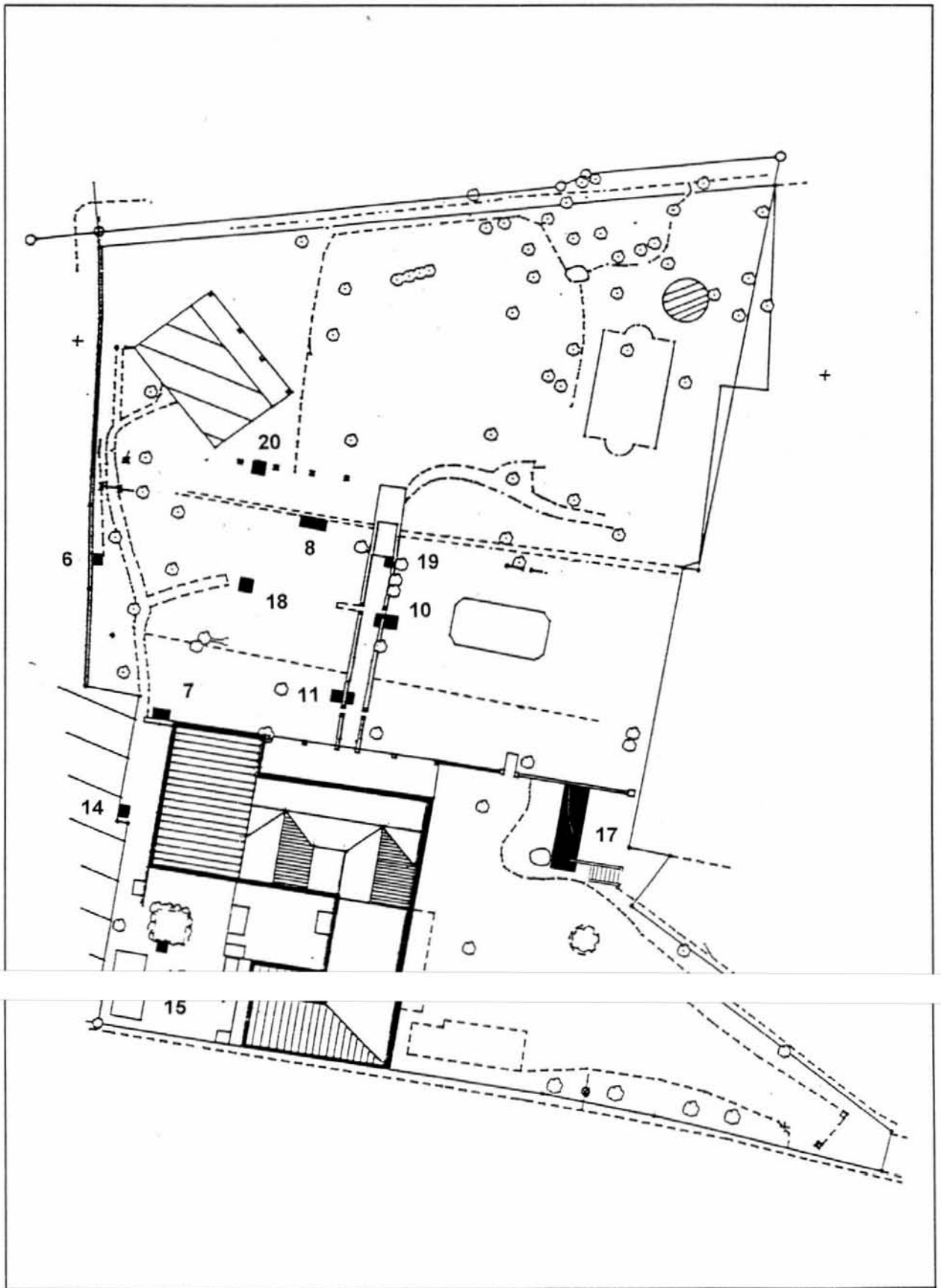


5 Portion of a plan showing water channel



6 **Location of excavation areas** Ref: T. Thorold Architects 980/20

Features investigated fall into a number of categories:-

Outbuildings - Areas 17, 15
Original surfaces and elevations – Areas 11A, 11B, 10A, 10B, 19, 20, 8, 18
Water furrow and storage - Areas 7, 6, 14

The area numbers are not sequential and reflect the manner in which the areas have been grouped for discussion. Missing numbers in the sequence reflect areas where tests were not excavated.

3.1 Outbuildings

3.1.1 Area 17

No visible surface evidence of the feature was detected and a series of trenches was dug in the area to determine whether we could uncover any traces of structural remains. Figure 7 shows a plan view of the walls that have been exposed.

At about 500mm below the surface we uncovered a stone wall footing. This depth approximates the height of the original surface identified in the previous phase of excavations. Extending the excavation laterally revealed further stone footings as well as exposing part of the wall which ACO previously described as the northern wall adjacent to the steps. A corner is present at the end of this wall from where it runs toward and up to the garden wall at the northern edge of the excavation. It appears that the “garden” or at least a part of it, formed part of the old outbuilding and suggests that the steps ran down against the outbuilding toward the adjacent property.

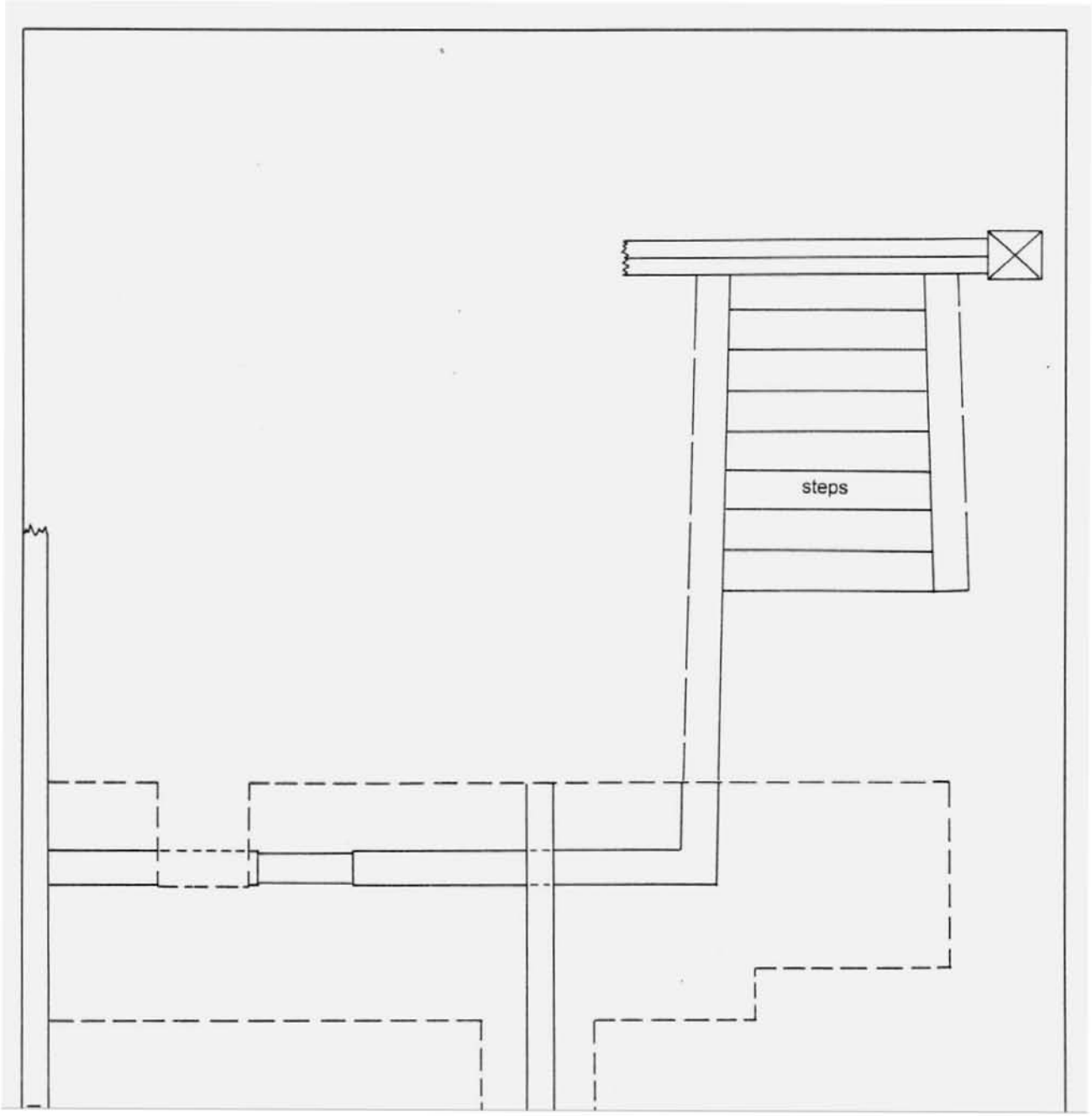
Another stone footing of an apparently more substantial wall cuts through a section of the outbuilding foundation and suggests that at some stage, after the demolition of the outbuilding, there might have been an original boundary wall at this point.

At the same depth as the top of the stone wall foundations and in many places lying against the stone features we found a brick and lime plaster layer. We suggest that this layer resulted from the demolition of the outbuilding. The presence of so much brick suggests that although the foundations of the outbuilding were stone, the walls were constructed of brick. Additionally, the presence of lime based plaster mixed in with the bricks covering the stone footings suggests that at least the brick part of the walls was plastered.

Artefacts including bone, metal, ceramics, glass and pipe stem fragments were found dispersed throughout the excavation in and below the humic garden soils.

3.1.1.1 Area 17 - Cobble layer

In the course of digging a deep test close to the garden wall, a layer of river cobbles was observed at about 1000mm below the surface. At first sight it was believed that this represented an earlier surface. However, on consideration, the surface was far too uneven, there was not much soil between the stones, and deeper testing showed that the layer is 700mm thick underlain by *in situ* orange clay.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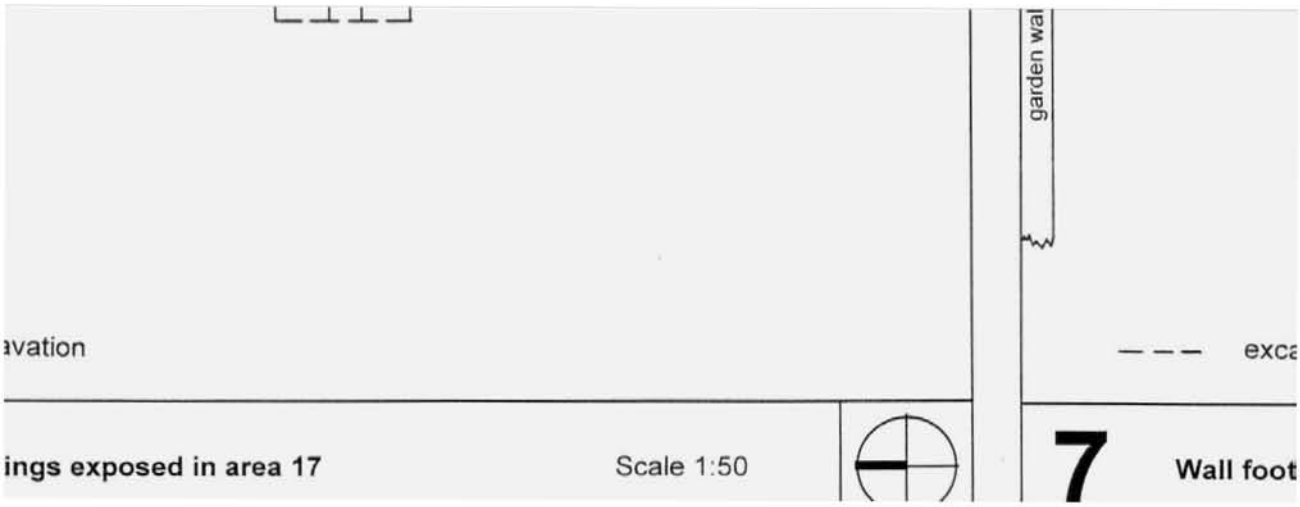
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Wall foot

Towards and against the garden wall, the stones are more loosely and irregularly spaced and soil is present between them. We suggest that this resulted from disturbance when the garden wall was built. In our opinion this layer of river cobbles is a natural feature, and is likely to be detected elsewhere in this part of the property. The nature of the material suggests that it may be the bed of an old stream/river. No artefacts were recovered from directly above or amongst the rocks.

3.1.2 Area 15

The 1899 Thom survey, amongst others, shows the presence of outbuildings to the west of the main house. As there are no visible traces of these structures on the surface today, a trench was excavated to investigate the exact location and nature of structural remains. Plates 1 and 2 show the east and west sections and the wall footings.

Stone wall footings are found at 590mm below surface. Excavation proceeded to a depth of 1000mm on both sides of the wall footing. To the south of the wall footing the deposit is an orange and red clay while on the northern side of the wall footing the deposit is a pale orange and yellow clay-like soil. Deposits of ash and coal are found on the northern side of the footings and indicate dumping of cleanings from domestic heating fires prior and subsequent to the demolition. The lack of artefactual material within these deposits suggests that they were from heating rather than kitchen hearths. Due to time and cost constraints we could not extend the excavation but a metal probe was hammered to a depth of 950mm below the base of the excavation to see if any trace of cobbled surfaces could be identified. No hard surfaces were encountered and indeed no surfaces were detected close to the wall footings.

3.2 Original surfaces and elevations on the terraces

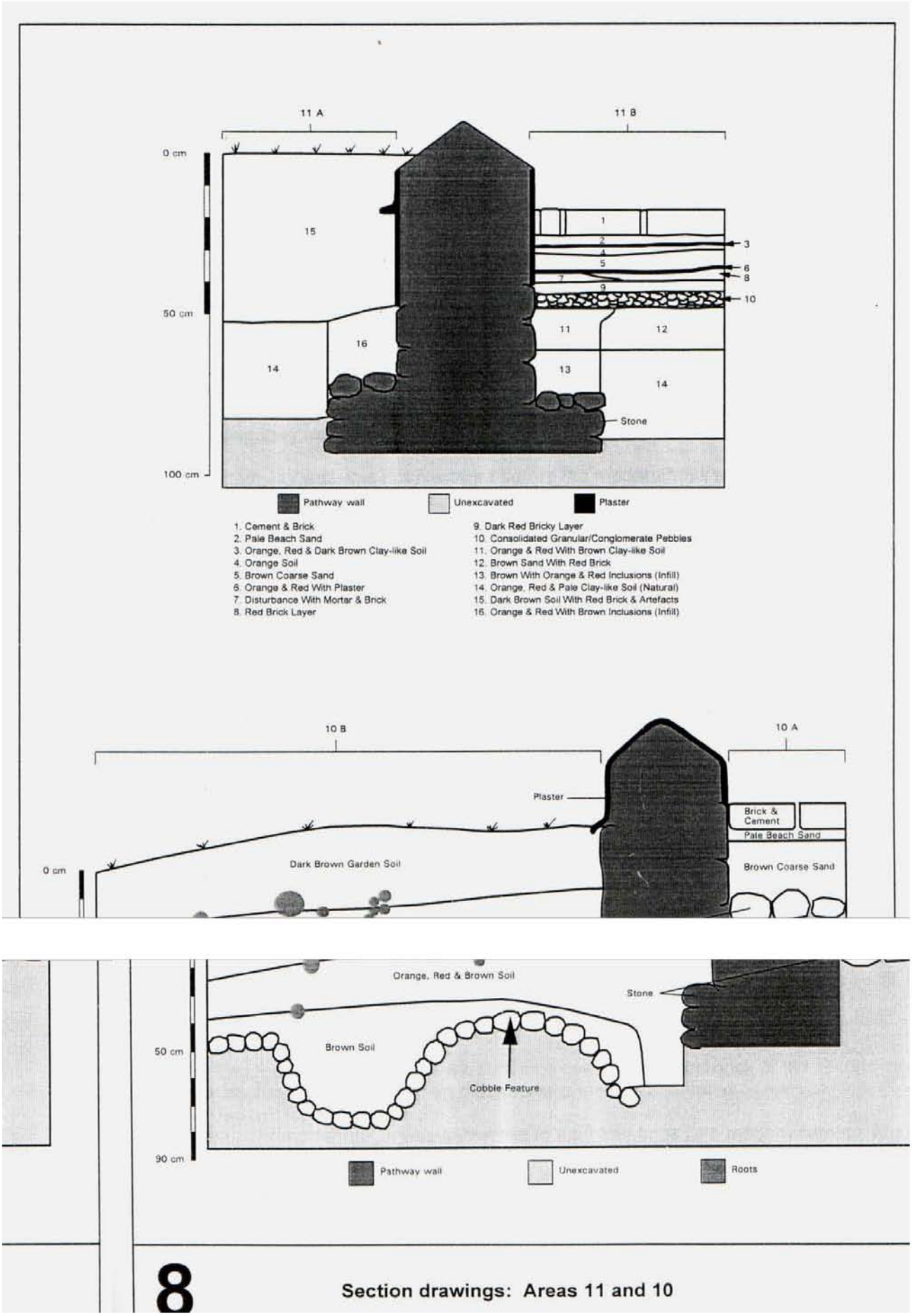
3.2.1 Area 11A

The garden path leading from the centre of the veranda of the house to the bottom of the second garden terrace is shown in various early plans. Although this path is still in the same location as indicated in the old plans, the current surface is paved with modern brick. We were requested to determine whether older surfaces were still in existence and if so what type of building material was used. A section drawing showing excavations in areas 11A and B is presented in Figure 8.

There is evidence of a trench for the foundation of the garden path wall below a layer of ferruginous pebbles and a layer of what appears to be crushed brick (9). The presence of the trench at this level in conjunction with the crushed brick and the nature of the plastering of the inner face of the wall, all suggest that in the past the surface of the path was at approximately this level. No original surfacing has been located although it is likely that brick would have been utilised.

3.2.1 Area 11B

At about 530mm below the current grass level is a surface of more clay-like material than the overlying humic garden soils. This material is the same as that found during the testing in the path in area 11A. Again there is a clear line indicating a trench cutting (for building the pathway wall) in this clay-like soil. The trench goes down to some 700mm below the current grass level where we uncovered a wall footing. No artefacts were found in either the natural



8 **Section drawings: Areas 11 and 10**

orange, red and pale clay-like soil or the trench infill while material was recovered from the overlying soils.

The modern plaster on the pathway wall goes down 100 - 180mm below the current grass level while older (lime) plaster beneath goes down some 500mm to approximately the same level as the clayey surface closely approximating the older level described in the pathway. At 1800mm below the current grass level, the modern plaster forms a “lip” which seems to indicate that the garden surface was at some point level with the top of the modern bricks of the garden path. It is clear that levels have been raised since the terrace was first constructed.

3.2.2 Area 10A

A section drawing showing of the excavation is shown in Figure 8.

On the pathway, modern brick was removed revealing roughly the same layers as at location 11A. A layer of cobbles is found 250 - 300mm below the top of the modern brick surface and lies in a red and orange clay-like soil which appears *in situ*. The cobbles vary in size and appear too uneven to have constituted a walking surface but it is not clear what else they represent.

It seems that the pathway wall was not plastered before the modern brick surface was laid since the plaster only extends to the surface of the modern bricks. It is possible that the old plaster has been replaced, or that the original surface coincided with the current level.

3.2.3 Area 10B

At 550mm below the present surface and a short distance to the west of the pathway wall is what appears to be a stone “feature” made from cobbles. From the section drawing it can be seen that the cobbles appear to form a channel. The presence of many large tree roots has made it difficult to fully explore the feature. This apparent channel may represent a modification of a natural feature (i.e. similar material to the cobble layer/stream bed found in area 17) into the form of a channel. Plate 3 shows the southern section shows the feature with the roots lying above it. At the same depth as the top of the cobble “feature” the pathway wall bottoms out and lies on top of a mixture of brown sand and red and orange clay-like soil. There is no clear foundation trench for the garden wall. The colour and nature of the stratigraphy in this excavation is quite different to the other holes on the western terraces. There is less of the orange clayey soil that is so common elsewhere.

A much more extensive excavation would be needed before we can say more about this feature.

3.2.4 Area 19

As it appeared that modern brick surfacing overlay the older brick of the second step, it was decided to determine if an older surface could be detected.

The upper modern brick was cemented to the older brick with modern cement. Modern cement is also found below the older brick. There is what appears to be some older cement below the present brick surface and may suggest that an older surface may have been laid at this approximate level i.e. very similar to the present level.

At 230mm below the top of the modern bricks are some large and small cobbles. These cobbles lie flush against the pathway wall and while they appear too uneven for a surface we only have a small area available for examination. If one considers the method of construction of the steps in area 17, it is not impossible that these represent part of the base of an older flight of steps.

3.2.5 Area 20

We are unable to say much about the deposits at this locality due to disturbance and very high water table.

3.2.6 Area 8

The aim of excavating at this location was to investigate the nature of the garden terracing and to determine whether the garden wall at the northern end of the second terrace was constructed before or after terracing. A section drawing is presented in Figure 9.

The excavation showed that since no trench was dug to build the wall, and since the deposit against the wall is not *in situ*, that the wall must have been built to retain soil after a levelling process took place. Since the soil against the wall is not *in situ*, we can discount the possibility that the retaining wall was built flush against the section of cutting. It would appear rather that the wall was first built on the original slope running down from the house, after which the area between the original ground surface and the new wall was filled and levelled with material removed from up slope (and other areas) as terracing progressed. While the lower part of the wall up to where it narrows is of Table Mountain Sandstone (TMS), the upper part is of brick.

Old lime plaster is present down to the top of the TMS base and is covered down to the present ground surface on the southern side by modern plaster. The irregular face of the northern side of the wall, when compared to the straight northern face of the wall on the eastern side of the garden path, indicates that at some point the wall collapsed and was rebuilt.

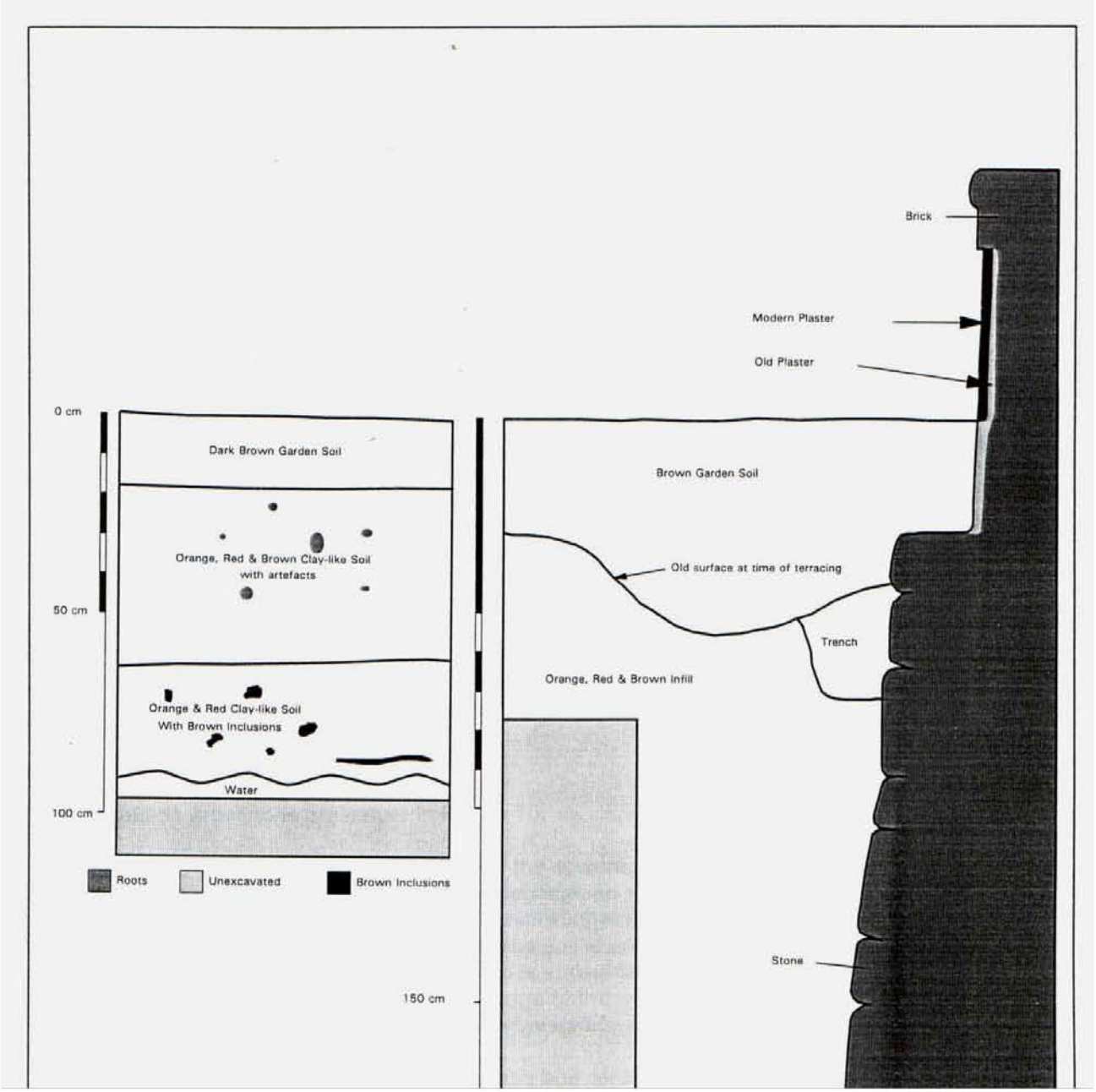
Excavation was stopped at the water table at a depth of 2100mm below present surface.

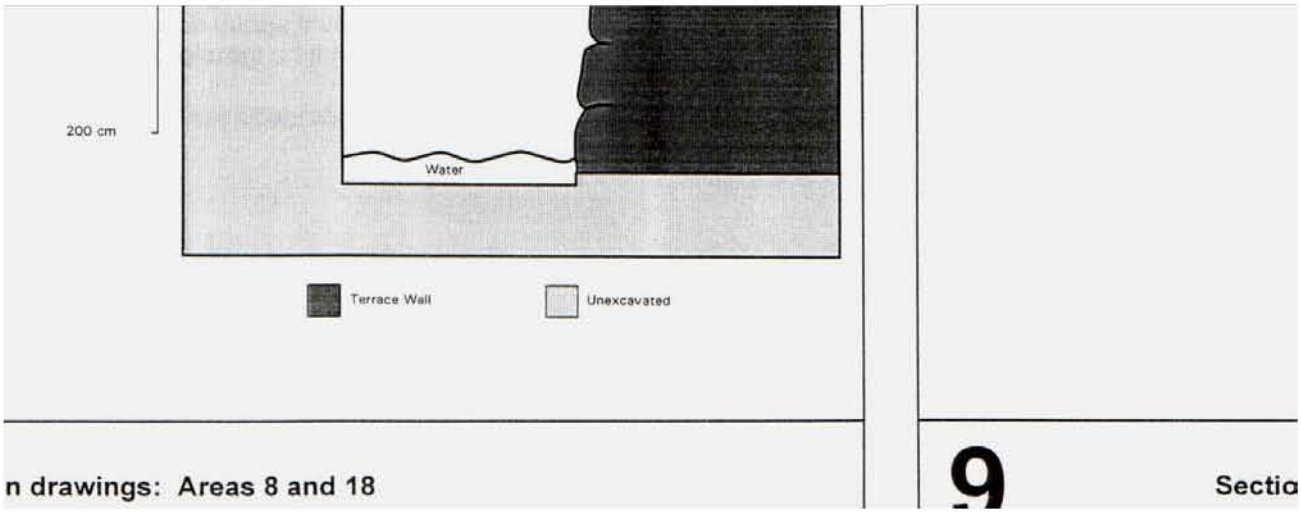
3.2.7 Area 18

A section drawing of the excavation is shown in Figure 9.

The top layer consists of humic dark brown garden soil. Below this is a thick layer of orange, red and brown clay-like soil which contains artefactual material such as glass, ceramic and bone. Below this is a thick orange and red clay-like soil with a few inclusions of brown soil that appear to be *in situ*. We did not excavate deeply into this layer due to water table being encountered at 900mm below surface.

The excavation showed that the stratigraphy from this trench and the one excavated at location 8 is similar, but that the thickness of the layers varies. The fill in area 18 is some 460mm thick while the fill in area 8 is at least 1500mm. This indicates that a great deal of fill was used to bring the northern part of the second terrace to the same level as the southern part.





n drawings: Areas 8 and 18

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3.3 Water channel and related features

3.3.1 Area 7

According to the early plans, a water furrow or canal ran through this portion of the property. Excavations were placed to investigate the exact location and nature of this water feature. The features uncovered in this area can be seen in Plates 4 and 5.

This area has been significantly disturbed by laying of modern services. Despite the disturbance, at 400mm below the present ground surface there are traces of cobbles. The presence of a cobbled surface in the alley (area 14) may suggest that the cobbles here are part of a more extensive cobbled surface around the house. Against the southern side of the alley wall (next to the gate) are traces of an old partially demolished square brick feature which probably functioned as a manhole. The top of this feature is about 150mm below the present ground level. On the western side of this feature and partially incorporated into it, are the remains of what must have been a circular brick and plaster feature which must have been present before the manhole was built. This construction is reminiscent of a well shaft but given that we know that there is supposed to have been some form of water storage facility in this vicinity, it is entirely possible that this is either that feature or another one (as the storage “cask” shown on the early plans is clearly not in this location).

As numerous services run through this area, it will not be possible to fully explore this feature without diverting of some of them.

3.3.2 Area 6

A section drawing is presented in Figure 10.

Below the garden soil and to the west of the sewerage trench is a layer consisting almost entirely of plaster and probably indicates an episode of re-plastering. All the stratigraphic layers lie flush against the wall suggesting that they were deposited after the wall was built. Orange and red clay-like soil is encountered at approximately 1100mm below surface where the water table is encountered. At about 1200mm below the surface and directly below the eastern edge of the wall footing is a faint but visible soil change indicating the trench that was excavated for construction of the wall foundation.

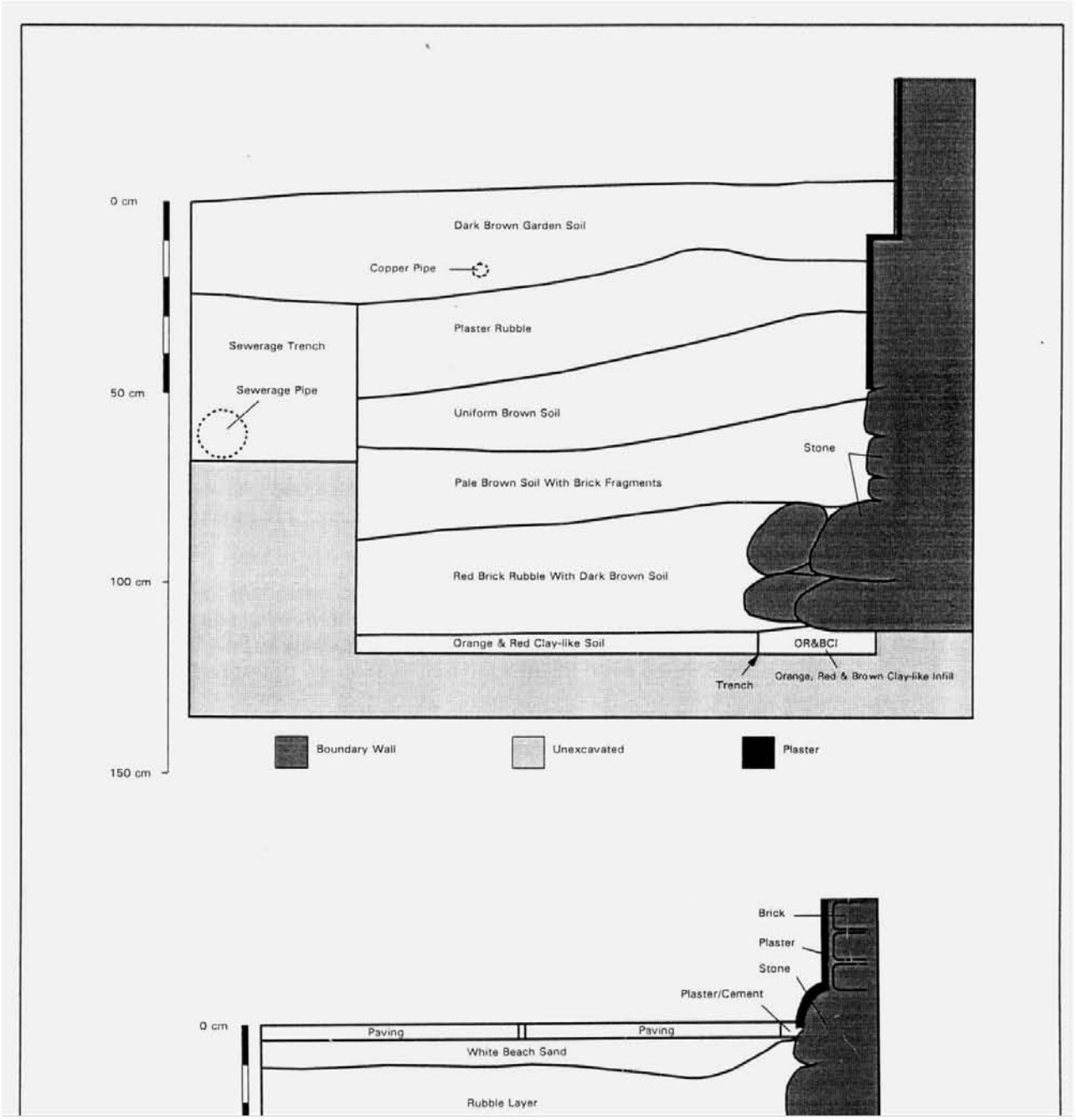
According to the architect, plaster stripping and renovation of the Waterhof house occurred during the 1920’s. The red brick rubble layer may be consistent with that episode. The level of the bottom of the plaster on the wall indicates an old level.

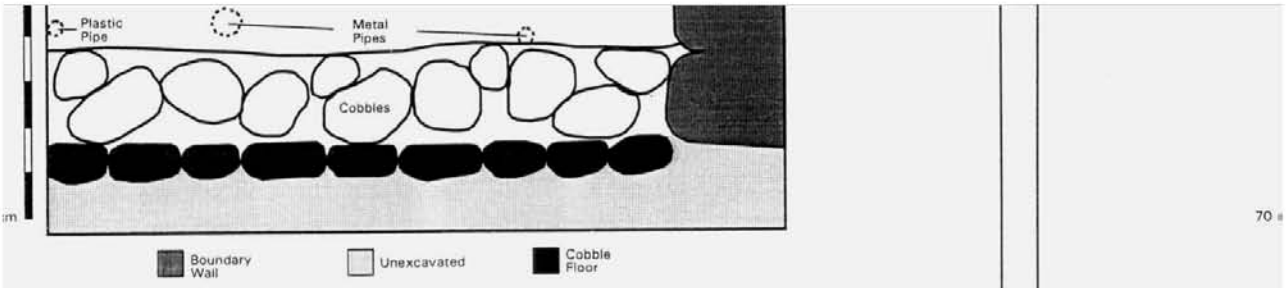
No traces of the water furrow or canal were observed.

3.3.3 Area 14

A section drawing is presented in Figure 10.

A layer of rubble containing brick, plaster and cobbles also produced a considerable amount of artefactual material including glass, ceramic, bone, metal and marine shell. A layer of cobbles lies below the rubble and on top of a formal cobble surface at a depth of 540mm below surface. The cobbled surface is shown in Plate 6. It appears that the formal cobbled





Section drawings: Areas 6 and 14

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surface runs beneath the wall footing, but without disrupting the surface this is difficult to confirm. The layers above the cobbles were introduced after the wall was constructed as there is no sign of any foundation trench.

The level of the cobble surface is similar to the level of that uncovered during excavations in June 1998 in the courtyard and may indicate that cobbling such as this was quite extensively used around the house. No water features were uncovered in this area suggesting that either the plans are inaccurate or these structures have been demolished or covered.

4. CONCLUSIONS

This investigation has produced varying results. While we have been able to confirm the presence of structural remains relating to the old outbuildings, similar results have not been achieved in as far as the water related features are concerned. A fragment of a circular structure may represent part of the system but could not be fully explored without re-routing services. The fact that water features shown on the plan have not been recognised suggests that more extensive excavation is needed as they may lie at greater depth.

Excavation of test holes on and around the terraces has indicated that levels in the past were generally lower than those of today. This is confirmed by both levels on the pathway as well as garden levels. No traces of original pathway surfacing have been recognised although we believe that brick might have been used.

An enigmatic cobble feature to the east of the garden wall on the second terrace near the swimming pool needs to be explored more fully before any conclusions can be drawn on whether it represents a natural or a man-made feature.

5. RECOMMENDATIONS

1. The trenches excavated at location 17 have been left open at the request of the architect. These should eventually be backfilled preferably with building sand or at least a layer of this with garden soil on top. This would alert anyone digging here in the future to the presence of the structural features and would make them easier to expose if this was required in future.

6. PROFESSIONAL TEAM

Report	Dave Halkett
	Peter Nilssen
Fieldwork	Peter Nilssen
	Mzwondile Sasa
	Mzunzima Mjikaliso

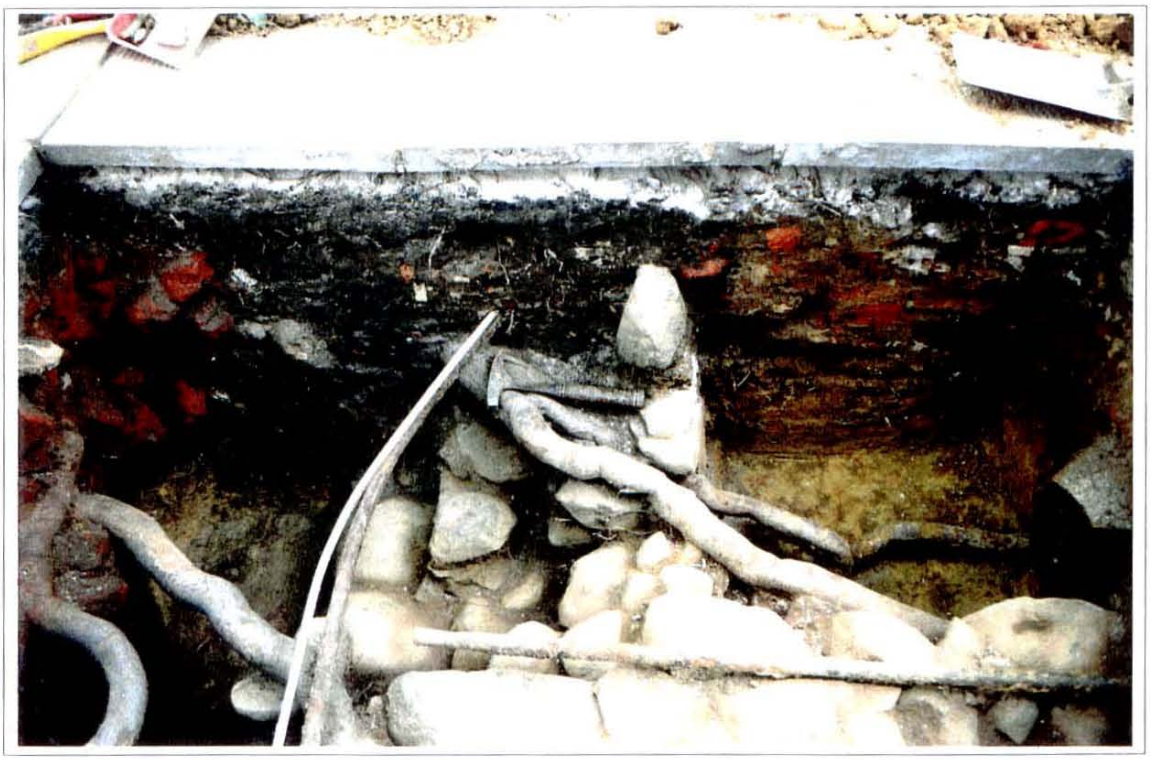

PLATE 1: The east section of the excavation in area 15 showing the old wall footings in the foreground.

PLATE 2: The west section of the excavation in area 15 showing the old wall footings in the foreground.

PLATE 3: The southern section of the excavation in area 10B. The cobble "feature" is visible below the roots at left while the base of the pathway wall is seen at right.

PLATE 4: A view of the fragment of circular brick feature in area 7, partially covered by the wall and more recent manhole.

PLATE 5: A view of the features in area 7

PLATE 6: The cobbled surface in area 14