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ARCHAEOLOGICAL EXCAVATIONS
IN THE PRISON COMPOUND
CONSERVATION AND FUTURE USE
FREMANTLE PRISON



PREFACE

The Government decided in 1988 that following the closure of Fremantle Prison it would retain ownership and control of the prison complex and it would accept responsibility for its conservation and management.

Because of its exceptional cultural significance, future conservation and development at the prison will be carried out in accordance with the principles of the Australian Charter for the Conservation of Places of Cultural Significance (the Burra Charter).

The bulk of the research and planning is being completed by a project planning team. The Fremantle Prison Conservation and Future Use project planning team members are:-

RALPH HOARE	-	BUILDING MANAGEMENT AUTHORITY
AGNIESHKA KIERA	-	CITY OF FREMANTLE
GERRY MACGILL	-	DEPARTMENT OF PLANNING AND URBAN DEVELOPMENT

This document was commissioned for the Fremantle Prison Conservation and Future Use project and is one in a series to be published.

Ralph Hoare ARAIA
Project Manager
Fremantle Prison Conservation and Future Use
May 1990 RCP

**FREMANTLE PRISON CONSERVATION
AND FUTURE USE**

**ARCHAEOLOGICAL EXCAVATIONS
IN THE PRISON COMPOUND**

A report for the
Building Management Authority

By

LOUISE J. BAVIN

For

Centre for Prehistory
University of Western Australia

Version: 1

Date: June, 1990.

CONTENTS

ACKNOWLEDGEMENTS	
FIGURES	
TABLES	
INTRODUCTION	1.
Stage Two Objectives	1.1.
Consultant's Brief	1.2.
EVIDENCE	2.
SITE RESEARCH	3.
Methodology	3.1.
SUMMARY OF STRUCTURES LOCATED AND CONFIRMED	4.
Introduction	4.1.
Cisterns	4.2.
Bath House and Well	4.3.
AREA I: SOUTHERN KNOLL	5.
Introduction	5.1.
Cisterns	5.2.
Incinerator	5.3.
Wooden Division	5.4.
AREA V: FEMALE DIVISION YARDS	6.
Introduction	6.1.
Northern Yard	6.2.
Southern Yard	6.3.
AREA VII: EASTERN LAWN	7.
Introduction	7.1.
Bath-house	7.2.
Well	7.3.
AREA X: FRONT OF SOUTH MAIN CELL BLOCK	8.
Introduction	8.1.
Metalled Road	8.2.
ARTIFACTS	9.
Introduction	9.1.
Southern Knoll	9.2.
Female Division Yards	9.3.
Eastern Lawn	9.4.
South Main Cell Block	9.5.
MATRIX CHARTS	10.
Southern Knoll	10.1.
Female Division Yards	10.2.
Eastern Lawn	10.3.
South Main Cell Block	10.4.

SECTION DRAWINGS	11.
PHOTOGRAPHY	12.
ANALYSIS AND CONCLUSIONS	13.
Introduction	13.1.
Prison Production	13.2.
Diet	13.3.
Structural Developments and Occupational Phases	13.4.
Prison Plan Accuracy	13.5.
Conclusion	13.6.
SITE SIGNIFICANCE	14.
Introduction	14.1.
Southern Knoll	14.2.
Female Division Yards	14.3.
Eastern Lawn	14.4.
Front of South Main Cell Block	14.5.
CONSERVATION AND MANAGEMENT RECOMMENDATIONS	15.
Introduction	15.1.
Recommendations	15.2.
BIBLIOGRAPHY	16.
APPENDICES	17.
1. Archaeological Zoning Plan (Bavin 1990:4.1-4.4)	
2. Building Management Authority and Public Works Department Plans	
3. Excavation Details and Stratigraphic Sequences	
4. Artefacts	
5. Levels and Bearings	

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FIGURES

- FIGURE 1: Fremantle Prison Compound and Environments.
- FIGURE 2: Fremantle Prison Compound, Archaeological Zoning Plan (Bavin 1990:Figure 4).
- FIGURE 3: Fremantle Prison Compound (Bavin 1990:Figure 3).
- FIGURE 4: Southern Knoll (Area I), Trench Location.
- FIGURE 5: Female Division Yards (Area V), Trench Location.
- FIGURE 6: Eastern Lawn (Area VII), Trench Location.
- FIGURE 7: Front of South Main Cell Block, Trench Location.
- FIGURE 8: Cisterns Site; Trench 1, Square 2, East Face.
- FIGURE 9: Cisterns Site; Trench 6, East Face.

TABLES

- TABLE 1: Artefacts excavated from the Cisterns, Incinerator and Wooden Division.
- TABLE 2: Artefacts excavated from the Female Division Yards.
- TABLE 3: Artefacts excavated from the Bath House and Flush Well.
- TABLE 4: Artefacts excavated from the Parade Ground.

1. INTRODUCTION

1.1. STAGE TWO OBJECTIVES

1.1.01. This report is the on-site assessment component of the Fremantle Prison archaeological program. The program was commissioned by the Building Management Authority (B.M.A.) on behalf of the State Government. This report follows recommendations presented in the Stage One report, Archaeological Zoning Plan of the Prison Compound (Bavin 1990). The Stage One report details a prioritized list of sites in Fremantle Prison which were classified according to their archaeological sensitivity and research potential (Figure 2, Appendix 1). In the Stage One report, areas where material remains of historical or archaeological research interest have survived and which are seen to be highly sensitive to development activities which would disturb sub-surface deposits have been allocated the top zoning category to protect them. Conversely areas which are not likely to contain archaeological remains have been given the lowest zoning category (after Pearson 1984).

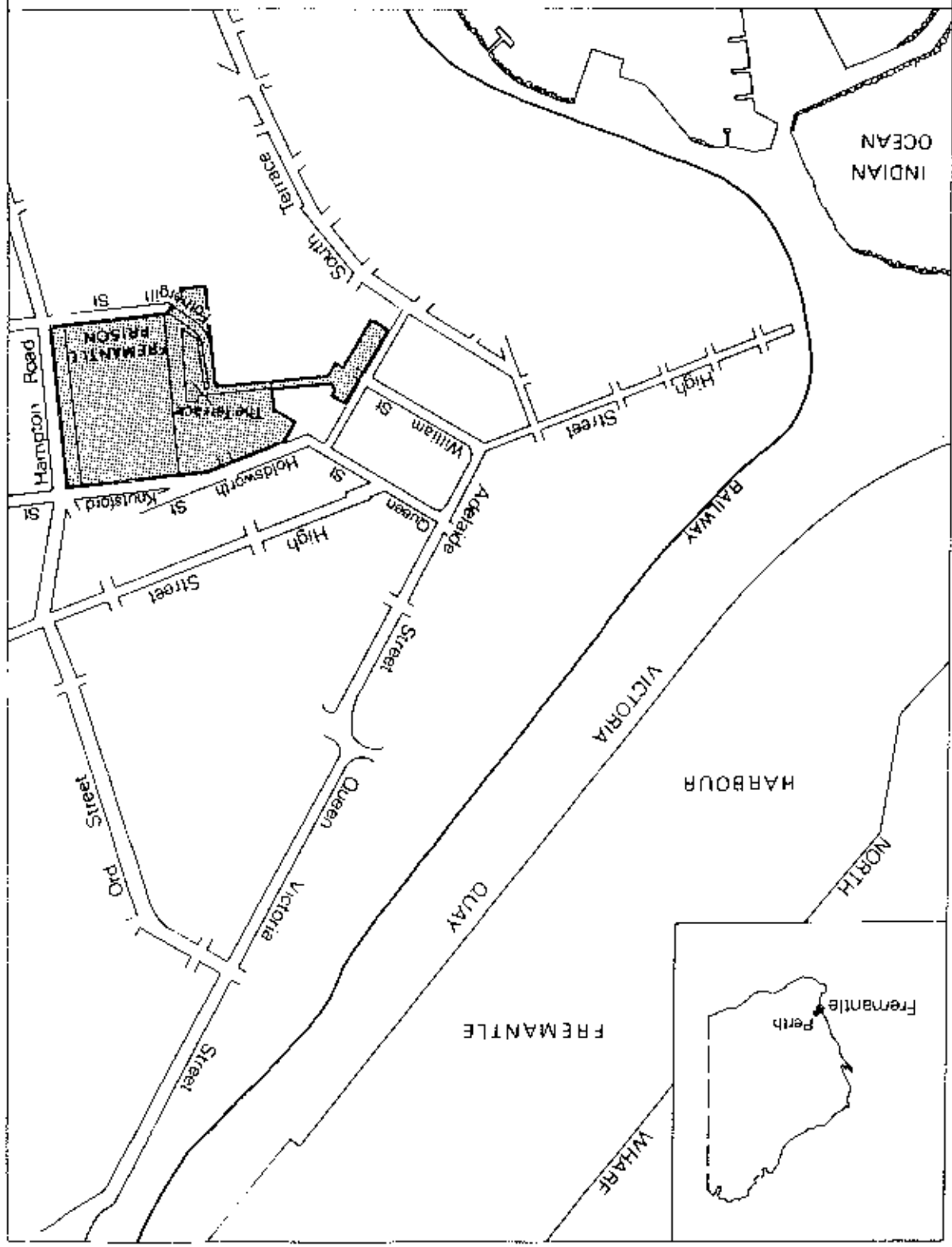
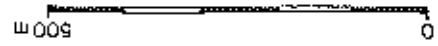
1.1.02. In this report selected sites are examined to test their archaeological potential and to assess site significance. These investigations are not exhaustive. Of the 17 areas classified as Zone A (high priority sites) or B (medium priority sites) in the Stage One report, four have been selected for excavation and analysis in this report. These areas include the Southern Knoll (Area I), the Female Division Yards (Area V), the Eastern Lawn (Area VII) and the Front of South Main Cell Block (Area X).

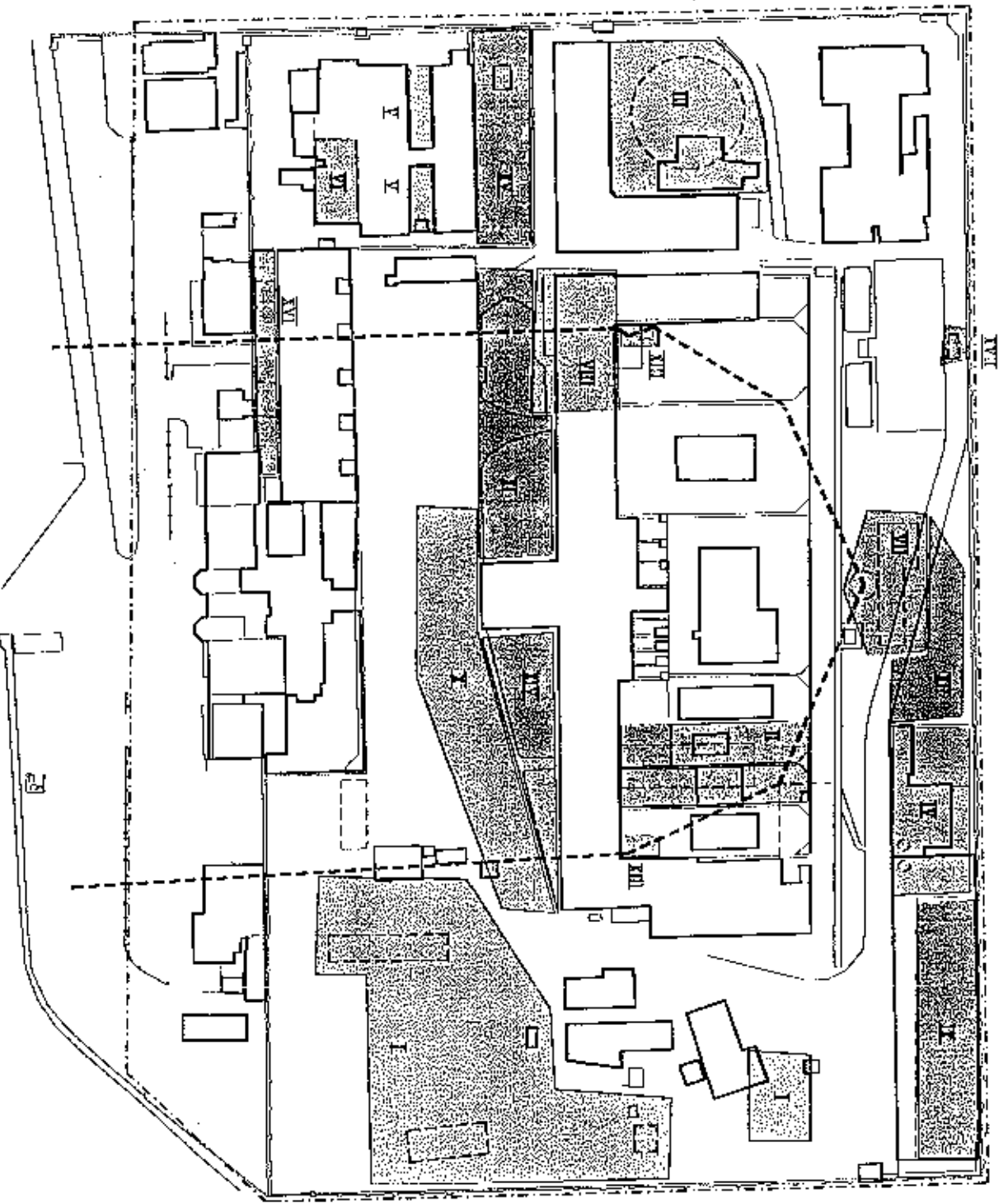


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Fremantle Prison Conservation & Future Use Location & extent of study area








Figure 1





Scale
 0 5 10 25 50 100
 Feet

Figure 2
FREMANTLE PRISON COMPOUND
 Archaeological Zoning plan
 (Bevia 1999:4)

-  ZONE A
-  ZONE B
-  ZONE C
-  EXISTING STRUCTURES
-  DEMOLISHED STRUCTURES
-  EXISTING SUB-SURFACE STRUCTURES
-  ZONE BOUNDARY




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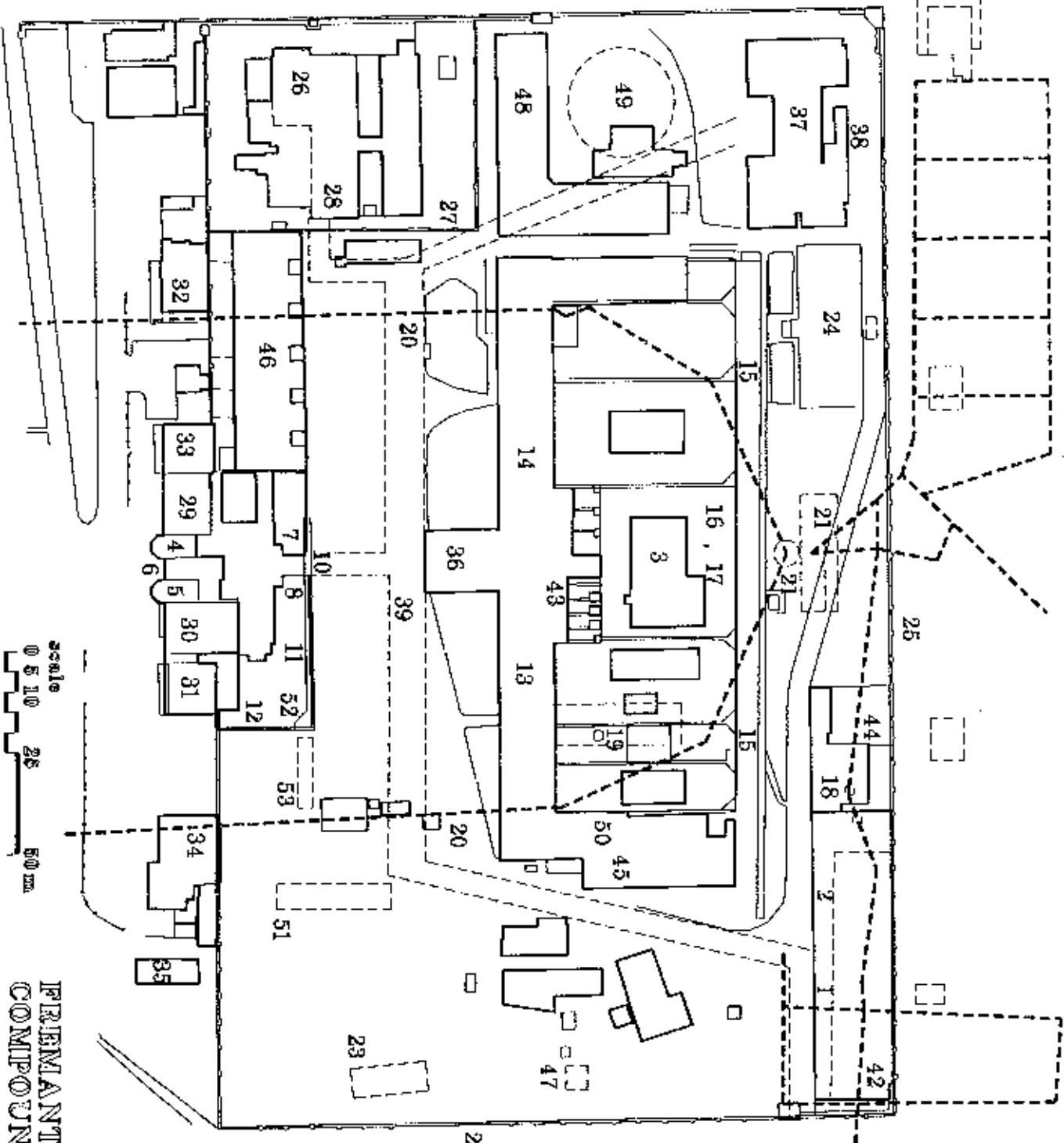


FIGURE 3
FREMANTLE PRISON
COMPOUND

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 AUSTRALIA



- EXISTING STRUCTURES
- - - DEMOLISHED STRUCTURES
- - - EXISTING SUB-SURFACE STRUCTURES

1	Quarantine and
2	generally used
3	as a store
4	cell block
5	cell block
6	cell block
7	cell block
8	cell block
9	cell block
10	cell block
11	cell block
12	cell block
13	cell block
14	cell block
15	cell block
16	cell block
17	cell block
18	cell block
19	cell block
20	cell block
21	cell block
22	cell block
23	cell block
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36	cell block
37	cell block
38	cell block
39	cell block
40	cell block
41	cell block
42	cell block
43	cell block
44	cell block
45	cell block
46	cell block
47	cell block
48	cell block
49	cell block
50	cell block
51	cell block
52	cell block
53	cell block

1.2. CONSULTANT'S BRIEF

- 1.2.01. The brief from the Building Management Authority was to:
- Excavate selected trenches in consultation with the Project Planning Team;
 - Analyse and interpret the physical evidence uncovered;
 - Prepare a report containing results, plans, photographs, conservation and management recommendations and a statement of the significance of each archaeological site.
- The time allocated to fieldwork was 15 days. The excavation program was confined to establishing the existence and the extent of remains in those sites selected for investigation. This did not require the entire excavation of each site given that archaeological sites are a non-renewable resource. Further excavations are recommended on the basis of the assessed research significance of sites discussed in this report.

2. EVIDENCE

2.1. Archaeological investigations in this report are based on evidence presented in the Archaeological Zoning Plan of the Prison Compound (Bavin 1990). The main sources which have been incorporated include:

- Plans drawn by the Royal Engineers, Building Management Authority (B.M.A.), formerly the Public Works Department (P.W.D.), and the Water, Sewerage and Drainage Board (W.S.D.);
- Archival documents of the Department of Corrective Services, the Colonial Secretary's Office (C.S.O.) and the Colonial Government in the W.A. Blue Books;
- British Parliamentary Papers (B.P.P.) published in Votes and Proceedings (V&P).

Additional sources of information include reports by Basworth (1990), Kerr (1990) and McIlroy (1989), and personal comments by prison officers, F. Jim Mitchell and Roger Lucanus, Ross Smith (B.M.A architect) and Murray Dare (B.M.A. draughtsperson).

3. SITE RESEARCH

3.1. METHODOLOGY

3.1.01. Within the Fremantle Prison Compound 16 archaeological trenches were excavated over a 15 day fieldwork period (Figures 4-7). Of these, eight trenches were located on the Southern Knoll (Area I), three trenches were opened in the Female Division Yards (Area V), four trenches were opened on the Eastern Lawn (Area VII) and one trench in front of the South Main Cell Block (Area X). On site, exact trench positions were calculated using five plans: Plan of Fremantle Prison (P.W.D. c.1908), Fremantle Prison Drainage (P.W.D. c.1910), Fremantle Gaol (P.W.D. 1951), Fremantle Prison Site Plan (B.M.A. 1987) and Fremantle Prison Assessment Centre and Workshops (B.M.A. 1989)(also Appendix 2).

3.1.02. Trench numbers were assigned in order of excavation within each site. All trenches were excavated using shovels, picks and trowels. Deposits were then sieved using a 3mm and a 5mm mesh and artefacts were bagged and labelled according to site, trench and spit numbers.

3.1.03. Stratigraphic sequences were not easily detected during excavation. Consequently, deposits were removed in 10 cm spits as arbitrarily defined units. Spit numbers were assigned in descending order. The depth of archaeological features and the stratigraphic and spit relationships in each site can be read from the matrix charts (chapter 10) and in the section drawings and plans (chapter 11).

3.1.04. Colour slides, levels, section drawings and plans were recorded for all trenches. The photographic reproductions in this report are laser copies of colour prints developed from slides. All levels may be adapted to the Australian Height Datum (A.H.D.). The section drawings are records of stratigraphic sequences in each trench. Generally, only the most representative sections in each trench were drawn. In this report spits are interpreted in terms of their position in the strata, their composition and artefactual content. Finally, the archaeological information has been compiled to establish an historical overview of past activities in each site area and in the prison as a whole.

4. SUMMARY OF STRUCTURES LOCATED AND CONFIRMED

4.1. INTRODUCTION

4.1.01. Nine trenches confirmed the presence of two substantial structures within the Fremantle Prison Compound. These structures are a set of Cisterns (1857), located on the Southern Knoll, and a Bath House (1856), on the Eastern Lawn.

4.2. CISTERNS

4.2.01. The Cisterns are almost entirely intact beneath the surface of the Southern Knoll. The structure has been partially filled with limestone and brick rubble through vents in the Cisterns' roof when the building was no longer used. Only one small area of the roof has fallen in. The eastern and western walls are still standing to their original height. The southern wall appears to consist of a natural caprock ledge which extends along the southern boundary wall of the prison. No trace of the northern wall was found.

4.3. BATH HOUSE AND WELL

4.3.01. The foundations of a bath house and flush well were found intact on the Eastern Lawn. Excavations in this area uncovered the western and northern walls of the building, including its north east and north west corners. Remains of slightly disturbed brick baths were also uncovered in the northern side of the building. A flush well is located outside the western wall of the bath house. This feature is intact. A deep well indicated on Fremantle Prison Drainage Plan (P.W.D. c.1910), however, was not investigated due to its location beneath the surface of a bitumen path.

Figure 4: Southern Knoll (Area 1), Trench Location

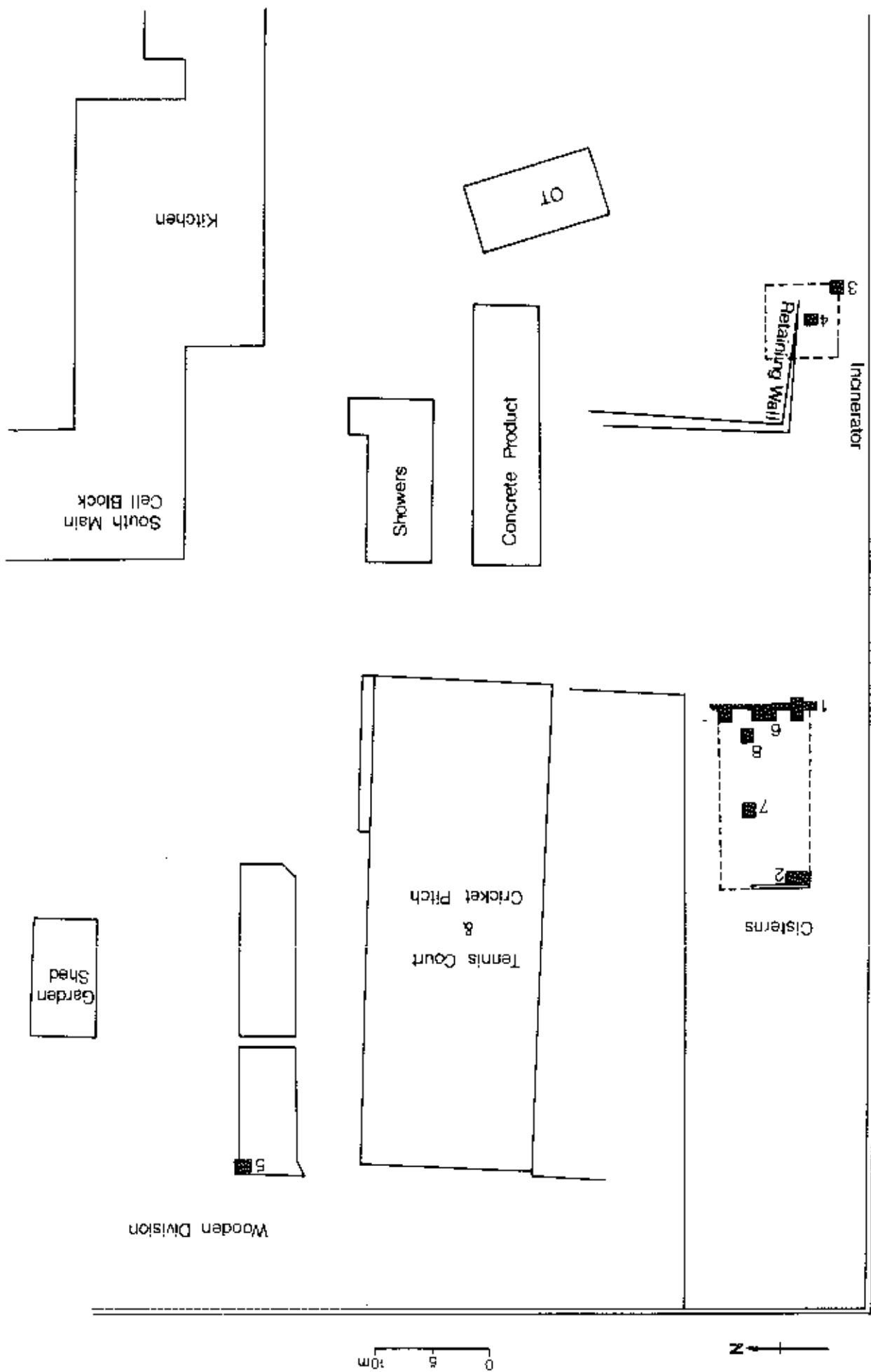


Figure 5 : Womens' Prison Yards (Area V),
Trench Location

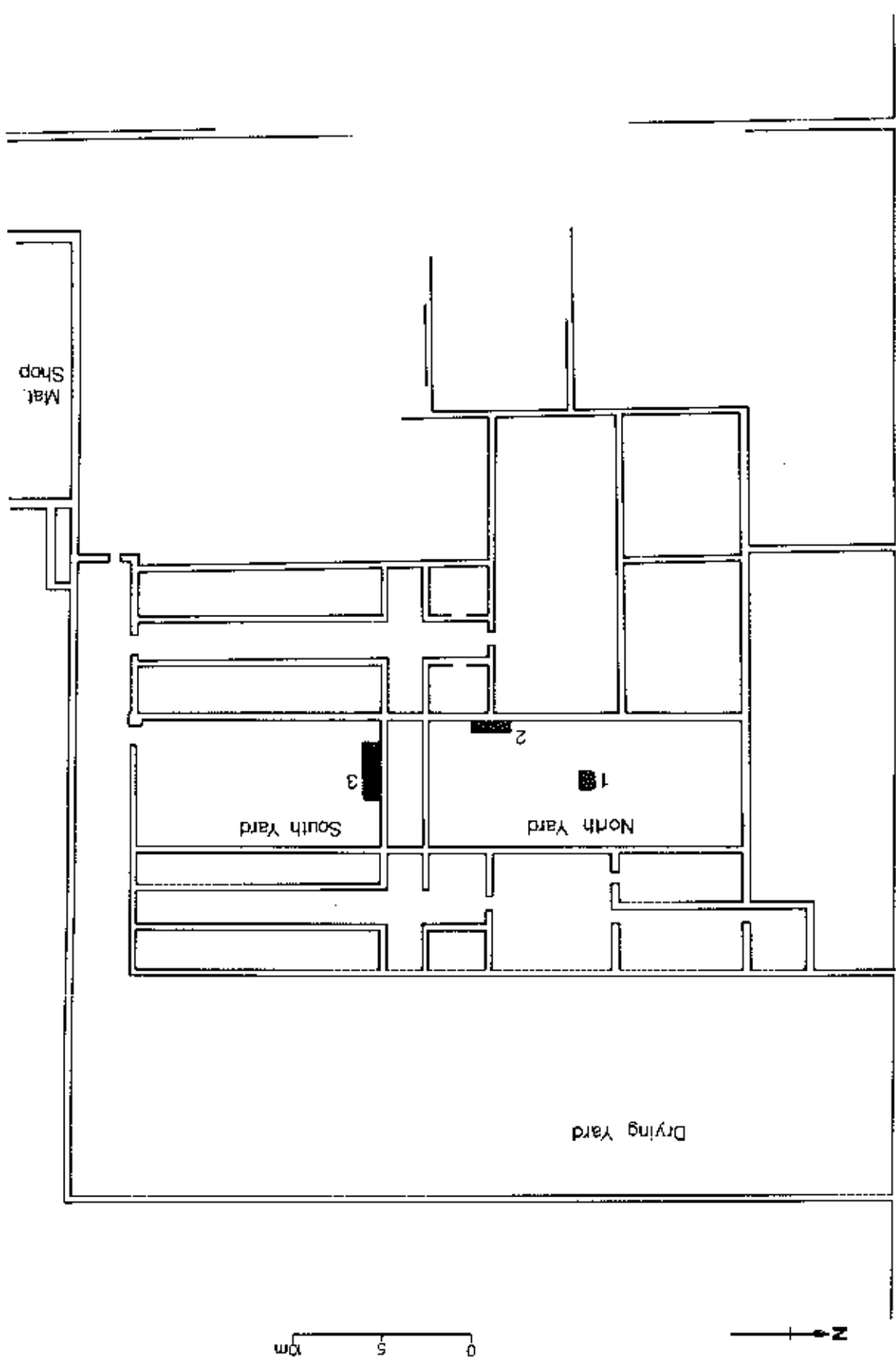
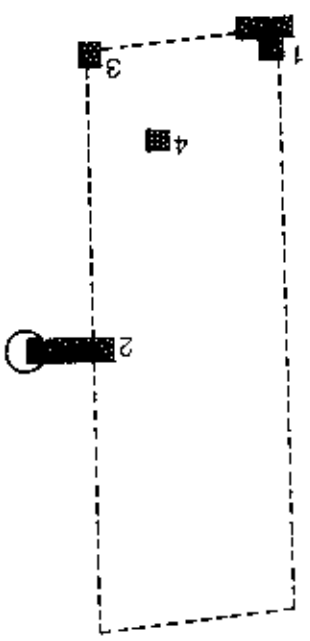


Figure 6: Eastern Lawn (Area VII),
Trench Location



Cisterns

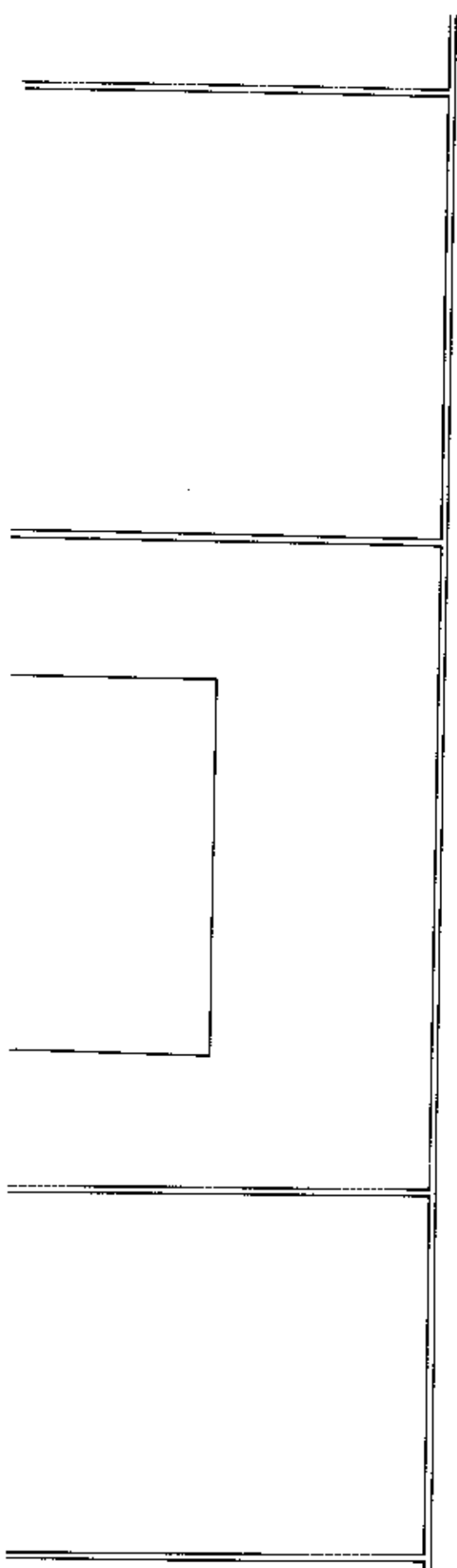
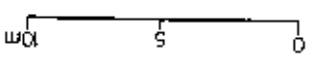
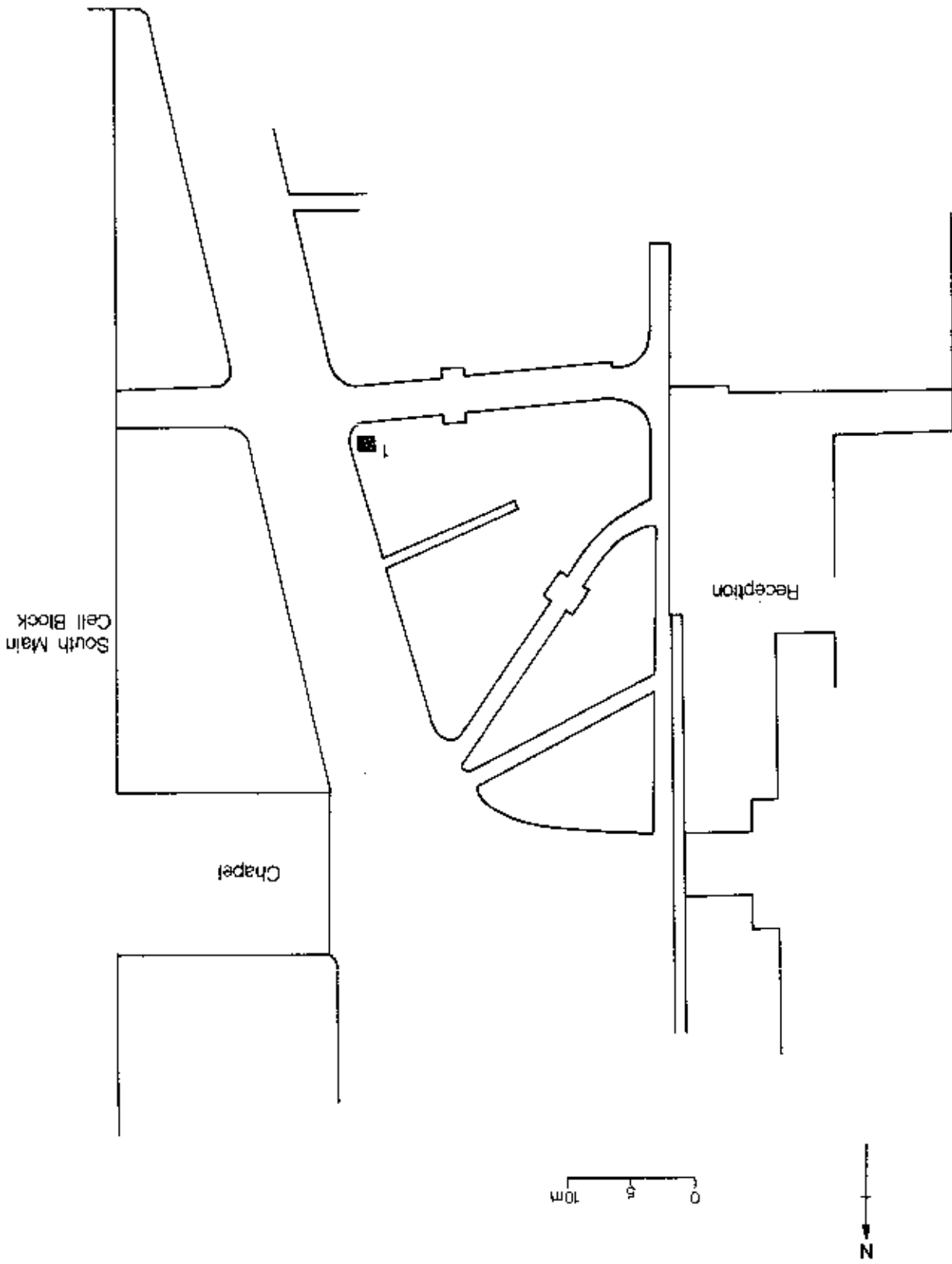


Figure 7: Front of South Main Cell Block (Area X),
Trench Location



5. AREA F: SOUTHERN KNOLL

5.1. INTRODUCTION

5.1.01. The Southern Knoll (Figure 4) has been classified Zone A because of the number and variety of sites located within the area. The sites include a stone shed, cisterns, incinerator and Wooden Division. In total eight trenches were excavated on the Southern Knoll in order to determine the extent of archaeological remains and to retrieve additional information which may supplement historical documents. Trenches were positioned so as to intercept structural features.

5.1.02. No trenches were opened at the site of the stone shed. This area is covered by a thick concrete surface. More accessible sites were investigated during this fieldwork period, given limited time and finances. The stone shed site should be tested for archaeological remains prior to development works in this area.

5.2. CISTERNS

5.2.01. FEATURES:

- Cisterns were constructed on the Southern Knoll in 1857 (Bavin 1990:2.2). This structure operated as a reservoir for the storage and distribution of water throughout the prison during the late 19th Century. It remained in use until c. 1897 at which time a larger set of cisterns was constructed on the Eastern Lawn. Initially, it was intended that two trenches would be opened at the Cisterns site. However, the discovery of substantial remains in our first trench led us to extend the investigation. In total, five trenches were excavated to determine the extent of remains at the Cisterns site (Figure 4).

- Trench 1 (1m x 2m) was opened to locate the south east corner of the Cisterns. Trench 2 (1m x 2m) was opened to locate the western wall of the Cisterns. During the final stage of fieldwork, three additional trenches were excavated at the Cisterns site. Trench 6 (1m x 2m) is an extension of trench 1. It was opened in order to determine whether the roof of the Cisterns comprises two or more arcs. Trenches 7 (1m²) and 8 (1m²) were opened in two of six grass patches growing over vents in the roof of the Cisterns. Trench 7 was located approximately 8.2m west of trench 6. Trench 8 was opened approximately 0.5m north west of trench 6.

- The top of a brick wall, running north to south, was uncovered approximately 0.15m below the grass surface in trench 1. It stands 1.11m high and consists of 14 courses of hand-pressed bricks (Figure 8). Trench 1 was extended north and south until the north east and south east corners of the building were reached.

- The roof of the Cisterns was uncovered in all trenches excavated at the Cisterns site. It is located approximately 0.25m below the surface. Mortared hand-pressed bricks form two arcs of an undulating curved roof (Figure 9). The

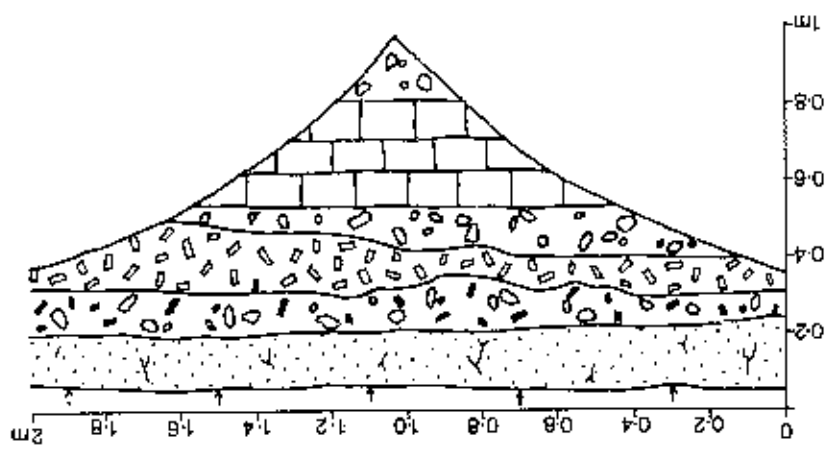


Figure 9 : Cisterns Site; Trench 6, East Face

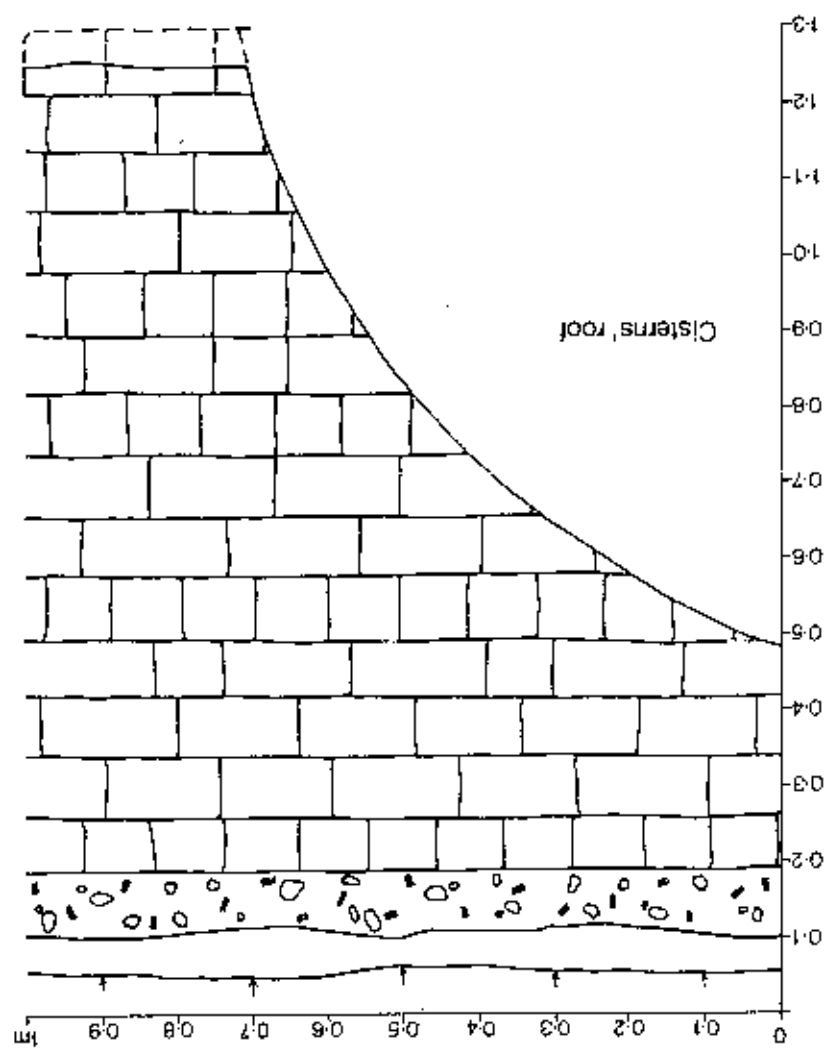


Figure 8 : Cisterns Site; Trench 1, Square 2, East Face

root consists of two parts which curve gradually to intersect along a central axis running east to west (Figure 9). In cross section the roof appears to be an inverted 'W'.

- In trench 8 the Cisterns' roof is intact. A flat square opening exists, over which a vent was once attached. Around the opening, the Cisterns' roof curves gradually. The curve was created by the application of increasing thicknesses of mortar. Slate has been inserted into the mortar as a damp proof device (see also McIlroy 1989:3.3.7).

- In trench 7 the roof has partially collapsed leaving a cavity that is large enough to look into the Cisterns. A rendered internal wall can be seen running east to west along the roof's central axis, standing approximately 0.8m south of trench 7. The wall provides structural support and divides the Cisterns into northern and southern sections. This feature is a tank partition wall.

- The cavity exists in, and around, what was once a square vent in the roof of the Cisterns. The vent itself appears to have been removed. The vent in trench 8 has also been removed. It is possible that all the vents were removed around 1900 when the building ceased to operate. The square openings then provided spaces through which to pour dry-fill into the disused Cisterns. The Cisterns have been partially filled with limestone and brick rubble.

- The eastern wall can be viewed inside the Cisterns through the vent square in trench 8. This wall is rendered and a pipe is located just north of the tank partition wall. Further north (0.2 m from the north east corner of trench 3), a double brick doorway leads into the northern tank. The door extends up to the Cisterns' roof. Using a flashlight, a second doorway could be seen in the Cisterns' western wall from trench 7. The eastern and western doorways are in line with each other. Possibly they provided access to a control system within the Cisterns.

- The Cisterns are well preserved. The building's eastern wall is almost entirely intact and extends 7.9 m in length. The south east corner of the wall is set against a natural limestone ridge which possibly constitutes the southern wall of the Cisterns. No trace of the northern wall, however, was found. The building is rendered with lime mortar (5mm thick) on both external and internal surfaces. The render would have protected porous brick walls from water damage.

- The position of the building, as indicated by excavation, differs from the Fremantle Prison Drainage Plan calculations by a maximum of only 0.4m (P.W.D. c. 1910) (see also Appendix 2 and 3). This suggests that the plan is extremely accurate. In trench 2 the position of the south west corner of the Cisterns corresponds precisely with the location of the building's western wall indicated on the Fremantle Prison Drainage Plan (P.W.D. c.1910).

5.2.02. STRATIGRAPHY.

- Deposits in the Cisterns site are well defined and fairly continuous. Throughout the site limestone rubble and boulders lie on top of the Cisterns'

root. At its deepest point, between the two roof arcs, this layer is 0.94m in depth. A compact layer of red brick with limestone inclusions lies above the major limestone deposit. The lowest deposits in trench 1 and trench 6, however, do not correspond. Rather, the brick deposit in trench 6 appears to be an alternative fill to the limestone boulders and rubble used in trench 1. A brick deposit in trench 6 corresponding to that in trench 1 is located above the lower brick deposit.

- Above these deposits a thin layer of tan coloured clay effectively seals the lower deposits in most trenches. This may have been done intentionally soon after the construction of the Cisterns in order to prevent water from collecting in the undulating roof. No drainage holes were noted in the wall or roof and the red brick appears to have been fired at a low temperature. This quality is diagnostic of hand-pressed bricks, which were superseded by machine bricks around the late 1870s. The lower deposits also create a level surface which covers the Cisterns' roof and creates a potentially useful land surface.

- At some stage organic dark brown soil, containing charcoal and limestone inclusions, was deposited over the clay surface. It appears to have been a previous garden surface which has been top-dressed with a layer of yellow sand. The yellow sand lies immediately below the existing lawn surface.

5.3. INCINERATOR

5.3.01. FEATURES:

- An incinerator was constructed on the Southern Knoll in 1900 (Bavin 1990:2.2). According to the Plan of Fremantle Prison (P.W.D. c.1908) the incinerator was a substantial structure with dimensions of 8.33m x 8.33m. It was used for the disposal of refuse until the early 1960s when it was demolished and new incinerators built nearby. Two trenches were opened at this site to locate remains of the structure and its contents (Figure 4).

- Trench 3 (1m²) was positioned 2.29m from the prison's southern boundary wall and 12.95m from the corner of the modern retaining wall to locate the south east corner of the incinerator. Trench 4 (1m²) was opened in what was predicted to have been the centre of the incinerator (Figure 4).

- No trace of the incinerator was found in either trench 3 or trench 4. The south face of trench 3 was set against a prominent caprock ridge beside the southern wall of the prison. Consequently, the incinerator could not have been located further south. It may have been built against the ridge for extra support.

- Eight rows of early machine bricks are located 3.8m west of trench 3. The bricks scale the natural limestone embankment. If the back wall of the incinerator was constructed against the limestone ridge then it is likely that the early machine bricks are remains of the incinerator's southern wall. It appears that the incinerator was built on bedrock and was almost entirely demolished with the exception of the western half of its southern wall. If the bricks do not represent the southern wall of the incinerator, then this suggests that the Plan of Fremantle Prison (P.W.D. c.1908) is inaccurate in terms of both the location of structures and their scale. On this plan the south east corner of the structure is located 2.54m from the prison's southern boundary wall and 12.7m from the corner of the modern retaining wall.

5.3.02. STRATIGRAPHY:

- Trench 3 and trench 4 were excavated to bedrock. Bedrock was located approximately 0.5m below the present grass surface. The bedrock is covered by 0.2m of compact limestone fill and boulders. Above this, deposits alternate between thin layers of sand containing charcoal, limestone, brick and mortar rubble, and rich deposits of charcoal and ash. Trench 4 is particularly rich in charcoal. The most recent deposit over the site consists of dark brown organic soil with laterite and limestone inclusions. This layer extends approximately 1.5m below the existing grass surface.

- The ash content of trench 4 suggests that an incinerator was once located at the site, or indeed close by. It appears that many episodes of ash deposition have occurred. However no substantial ash deposit was found which might confirm the presence of an incinerator. It is possible that the ash was distributed across the site from another incinerator(s). Until recently, ash from the new incinerators, located in the grounds of the Concrete Product Shed, was distributed over the Southern Knoll for at least 3 decades (pers. comm. F. Jim Mitchell). This would account for the rich charcoal content in many of the trenches so far examined in this report.

5.4. WOODEN DIVISION

5.4.01. FEATURES:

• Wooden Division was built in 1856 to accommodate an excess of some 176 prisoners in Fremantle Prison (Bavin 1990:5.1.03). The structure was located on the north west end of the Southern Knoll until its demolition around 1897. The site of Wooden Division is located in the present grounds of the prison vegetable garden. Modern machine brick boundaries (17cm high) separate various garden plots. The boundaries, however, follow the exact outline of Wooden Division. One trench was opened to assess whether any remains of Wooden Division exist and to determine why the modern brick boundaries follow the outline of the earlier structure (Figure 4).

• Trench 5 (1m²) was opened in the north west corner of the existing brick boundary. The trench was extended 0.25m to the north, underneath the modern brickwork and concrete path. No post holes, hand-pressed bricks or any other evidence of Wooden Division was located. This was not unexpected for two reasons: 1) the deposits are very disturbed due to present gardening activities and; 2) according to historical documents, materials from Wooden Division were reused in other construction works undertaken in the prison. It is likely that readily available cut timber would be reused, as opposed to being discarded. In either case, all materials from Wooden Division have been removed. The modern bricks, which outline Wooden Division, may have been laid soon after the building was demolished, possibly because the land surface was already level and footpaths enclosed the cleared area.

5.4.02. STRATIGRAPHY:

• Deposits consist of sand and limestone rocks overlying bedrock to a depth of 0.55m below the ground surface. Above the limestone is a 10cm layer of limestone and brown soil. This layer is a mixing zone of the deposits above and below. The dark brown organic soil located above the mixed layer is the existing garden.

6. AREA V: FEMALE DIVISION YARDS

6.1. INTRODUCTION

6.1.01. In the north west corner of the prison compound a kitchen complex was completed in 1855. The building contained a kitchen, bake house, wash house and laundry. By 1889 the kitchen complex had been extended and altered into a Female Division (Bavin 1990:3,3.07). The building continued to operate as a Female Division until the late 1960s when it was transformed into an Assessment Centre.

6.1.02. Four yards were considered for archaeological investigation. Yard is sealed by concrete and a large portion of the Drying Yard is a disused bitumen volleyball court. No substantial structures were ever erected in the Drying Yard. Two additional yards, however, are bound by the eastern side of the kitchen complex and the Female Division extensions. Both yards were external to the kitchen complex during the 19th century. In the 1890's, they were used as exercise yards by female prisoners. These yards were selected for archaeological investigation.

6.1.03. Three trenches were excavated in search of deposits associated with the kitchen complex and/or the Female Division. In particular, the sites were examined for dietary remains, artefact scatters and some earlier walls removed from the southern yard (B.M.A. Plan: Fremantle Prison Assessment Centre and Workshops 1989). The northern and southern yards of the Female Division have been classified Zone A.

6.2. NORTHERN YARD

6.2.01. FEATURES:

- Two trenches were opened in the northern yard (Figure 5). A toilet block was the only substantial structure to have been erected in this site. The toilets were constructed in the north west corner of the yard and are still operational. Trench 1 (1m²) was excavated in the centre of the yard to expose the depth of deposits and discard patterns in the site. Trench 2 (0.5m x 2m) is located beside the western wall of the yard. Most current inmates congregate in the corners of yards and alongside the yard walls. It was thought that the perimeter of the yard might also have been relatively high activity areas when the site operated as an exercise yard. A fire hydrant, drain pipes and other modern facilities have recently been installed in the corners of the yard. Consequently, trench 2 was positioned in a garden bed 2.5m from the south west corner of the yard.

- With the exception of two pieces of brick, deposits in trench 1 were sterile. No features and only sparse artefact scatters were uncovered in trench 2.

6.2.02. STRATIGRAPHY:

• In trench 1 limestone fill overlies bedrock and has been sealed with laterite and bitumen to create a hard yard surface. The garden surface of trench 2 overlies limestone fill, containing some artefacts, and natural pockets of yellow sand. These deposits overlie bedrock. Results from trench 1 and 2 reveal shallow deposits throughout the site and sparse artefact scatters around the perimeters of the yard.

6.3. SOUTHERN YARD

6.3.01. FEATURES:

• Trench 3 (1m x 3m) was excavated in the southern yard of the Female Division. According to Fremantle Prison Assessment Centre and Workshops (B.M.A. Plan 1989), some 'earlier walls' were removed from the northern side of the yard. Trench 3 was excavated to locate remains of these walls. It is situated 1.2m from the north west corner of the yard, and extends 3m to the east.

• No remains of earlier walls were found in trench 3. The only feature in the trench is a recently installed concrete block supporting a pole from a wire fence. Although the 'earlier walls' may have been proposed, and consequently drawn onto a plan, it appears that they were never constructed.

6.3.02. STRATIGRAPHY:

• Stratigraphic deposits in trench 3 also suggest that the 'earlier walls' were never constructed. Bedrock was located 0.35m below the bitumen surface of the trench. Above bedrock, deposits consist of natural pockets of yellow sand, limestone fill and a thin layer of laterite. These deposits are continuous throughout trench 3, with the exception of the concrete block, and no trace of foundations exists. This suggests that the site has not been disturbed by construction or demolition activities.

7. AREA VII: EASTERN LAWN

7.1. INTRODUCTION

7.1.01. The eastern embankment is the site of a bath house, a flush well and a deep well. These features were constructed in 1856 and remained intact until their demolition in the mid 20th century. The site has been classified Zone A and was selected for archaeological investigation in this report. Four trenches were excavated at the site to investigate deposits in the well and to examine the extent of remains and the display potential of the bath house. The deep well, located in the bath house, was not investigated because it is located underneath a frequently used bitumen road.

7.2. BATH HOUSE

7.2.01. FEATURES:

• Trenches 1 (1m x 3m) and 3 (1m²) were excavated to locate the north east and north west corners of the bath house (Figure 6). Trench 4 was opened to determine whether remains of baths exist beneath the southern lawn surface, as indicated on the plan of Fremantle Gaol (P.W.D. 1951).

• Foundations of the bath house were uncovered approximately 0.25m below the present lawn surface in all trenches excavated on the Southern Lawn. The foundations are made of limestone caprock and vary in width from 0.34m to 0.65m. A narrow line of bluestone borders the building's northern side.

• A post hole (0.07m x 0.15m) was located in the south east corner of trench 1, square 3. The wooden post was a vertical support beam of what appears to have been a doorway.

• Red machine bricks are located 1.02m north of the post hole and extend only a short distance into square 4. The post 1870's bricks have been laid in the form of a brick pillar base resting on caprock and bluestone (a hard insoluble volcanic rock). Although they are not part of the original structure (1856), it is likely that the bricks were added as a support replacing a decaying wooden beam. The distance of 1.02m between the red brick and the post hole is likely to represent an old doorway in the northern corner of the building's eastern wall.

• Indentations on the north wall foundations and the continuation of bluestone, suggest that either the red brickwork extended west in the form of a wall erected to replace the original wall, or that the marks represent the line of the original wall which was built on the caprock foundation and hitched up by bluestone.

• Red brickwork was also uncovered in the eastern half of trench 4. These bricks, however, are hand-pressed, indicating that the features are pre-1870 and are likely to be part of the original structure. They are set on caprock and bordered by a thin limestone foundation. The brickwork appears to comprise

the western ends of either two square, or rectangular, brick baths. The baths are positioned side by side, north to south, with a distance of 0.11m separating them. They are rendered on their eastern sides (the inside of the baths) and have been constructed to a height of 3 courses (0.28m). The foundation of a more substantial wall is located 0.3m from the thin bath foundation. It appears to be the base of a partition wall that separated the row of baths from the western half of the room.

- The bath house walls and brick baths were built on top of cut bedrock foundations bordered by a narrow line of bluestone blocks. The north east and north west corners and the western wall of the building are clearly defined suggesting that the foundations of the bath house remain intact under the eastern lawn. Bricks have been displaced from some of the bath walls indicating that the baths are not entirely intact.

- Measured from north to south, the true location of the bath house indicated by excavation only corresponds to Fremantle Prison Drainage Plan (P.W.D. 1910) calculations approximately 50 per cent of the time. Results may correspond or differ by up to 0.89m. In an east west direction the bath house wall lies 0.66m closer to the prison's eastern boundary wall than indicated on the plan.

7.2.02. STRATIGRAPHY:

- The bath house site has been covered by a series of landfill deposits. The surface of the caprock foundations has been smoothed over with crushed limestone. Following the demolition of the building in the mid 20th century, 20cm of limestone fill and grey sand containing pockets of charcoal was deposited over the site. Above this layer grey brown sand was distributed, creating an even surface. These deposits, sealed by the remains of a grass mat, cover the brick, bluestone and caprock foundation. They represent a mid 20th century grass surface established when the building was demolished. A thin layer of crushed limestone covers the early grass surface. This has been topped with grey brown sand containing sparse lime, brick and charcoal inclusions. These landfill sequences are sealed by top soil and the present grass surface covering the site.

- When the building ceased to operate in the mid 20th century the brick baths were filled with a thick layer of crushed limestone (0.33m). This provided a flat surface on which 0.15m of top soil has been deposited. The present grass surface seals these deposits.

7.3. WELL

7.3.01. FEATURES:

- In 1856 a well was excavated outside the western wall of the bath house. The well received water which was flushed from the baths. From the well this water then flowed into two main drains branching south west and north west from the well to the Parry Street cesspits. A 4m x 1m trench was excavated at this site to locate structural remains of both the western bath house wall and

the well. It was also hoped that if refuse had been deposited in the well, this too would be uncovered.

- Both features were uncovered in trench 2. The western foundation of the bath house is located 21.08m from the prison's eastern boundary wall and lies 0.22m below the existing lawn surface. The surface of the flush well was uncovered 23.33m from the boundary wall and 0.44m below the existing grass surface.

- The western foundation of the bath house consists of caprock which has been cut or shaped to form a 0.75m wide foundation. Two limestone blocks are set on the foundation running north to south. These blocks are part of the western bath house wall and indicate that the building was constructed from limestone, though most of the blocks seem to have been displaced.

- Three courses of red brick set on caprock rest against the western face of the bath house wall in trench 2. Like the bricks uncovered in trench 1, they may have been added for structural support during the late 19th or early 20th century. It is more likely that structural support was added in the early 20th century. At this time the building may well have been in need of repair due to its age. Furthermore, machine bricks were not mass produced until the 1880's (Bavin 1987:44-45,84; Wilson and Sands 1981).

- The wall of the well consists of cut limestone which has been rendered on its inside surface. It is not octagonal as indicated on the Fremantle Prison Drainage Plan (P.W.D. 1910). Rather, the well is circular with a diameter of about 2m.

- The location of the bath house and well revealed by excavation differs from Fremantle Prison Drainage Plan (P.W.D. 1910) calculations by 0.5m and 0.13m respectively. These positions demonstrate the relative accuracy of the Fremantle Prison Drainage Plan (P.W.D. 1910).

7.3.02: STRATIGRAPHY:

- Twenty centimeters of top soil overlies all features and deposits in the bath house site. The bath house itself was filled with limestone rubble. Seven deposits flow into the well, though not all of these deposits are continuous throughout trench 2.

- Due to time limitations the well was not excavated to bedrock. The lowest deposit uncovered in the well was red brown clay containing charcoal inclusions. In square 2, east of the well, the red clay overlies two hearths located in the same stratigraphic level above bedrock. The hearths are rich in artefactual material, particularly burnt bone. These remains may have been deposited from the incinerators and elsewhere when the well was being filled. It appears that refuse was stacked beside the well and shovelled into it as fill. Additional excavations in the well may uncover refuse within the lower deposits of the well as opposed to refuse deposits immediately outside the well.

• Above the red clay, layers of grey sand and dark yellow sand are two episodes of deposition designed solely to fill the well. Organic lime grey soil lies above the grey and yellow sands. This deposit extends east across the trench to the western bath house wall. A P.V.C. water pipe dissects trench 2 (square 3) within the lime grey soil. The continuous nature of the deposit, however, suggests no major site disturbance at this level. Therefore, it is likely that the deposit was laid at the same time as the modern P.V.C. pipe. The P.V.C. pipe supplies water to a system of sprinklers laid within the past three years (pers. comm. Jim F. Mitchell). Yellow top dressing sand was then laid over the location of the well to level the ground surface.

8. AREA X: FRONT OF SOUTH MAIN CELL BLOCK

8.1. INTRODUCTION

8.1.01. The front of South Main Cell Block is the location of the original metalled road, proposed in 1862. A garden was also established in the same year directly in front of South Main Cell Block (Bavin 1990:3.3.06;4.3.01). This area has been classified Zone B.

8.1.02. In 1862, a metalled road was laid in front of, and parallel to, the Main Cell Block with two branches extending from North and South Main Cell Blocks to the Hospital and Old Workshops. The existing main road in Fremantle Prison follows the course of the old metalled road.

8.2. METALLED ROAD

8.2.01. FEATURES:

- Trench 1 (1m²) was opened in front of South Main Cell Block to examine stratigraphic sequences in the Parade Ground and the depth of the metalled road in relation to bedrock. The trench was positioned 27.4m from the south west corner of the Chapel and 25.0m from the Administration Block. No features were uncovered in trench 1.

8.2.03. STRATIGRAPHY:

- Bedrock was located 0.62m below the present lawn surface. Rich brown fibrous soil on top of the bedrock represents an early ground surface (0.2m thick). This has been top dressed with about 10cm of yellow sand. The remaining deposit is recent and consists of rich brown fibrous soil. This layer is 0.35m thick and lies directly below the present lawn surface.

- The present lawn lies about 0.3m above the existing metalled road and is supported by concrete borders. The original metalled road cannot have been laid more than 0.3m below existing metalled road even if the earliest soil deposit was removed and the road laid on bedrock. It appears that the existing metalled road is also the original metalled road following repairs. During one episode in the recent past the ground level surrounding the road has been raised some 30cm.

9. ARTEFACTS

9.1. INTRODUCTION

9.1.01. Artefacts retrieved during the course of excavation works have been listed according to the site, trench, and square from which they were removed. The artefacts have been classified according to the guidelines of the Port Arthur Fabric Key (Davies and Buckley 1987:167; Appendix 7.1). The following descriptions are based on raw material and function. A more detailed artefact description, including artefact dimensions and their location within 10cm spits, is presented in Appendix 4.

9.1.02. A wide variety of artefacts have been excavated from 16 trenches within the Fremantle Prison Compound. The majority of artefacts consist of building materials and dietary refuse. In particular, the most common building materials consist of window glass, nails, hand and machine bricks and slate (Appendix 4). Other interesting architectural components include timber, floor tiles, slate roof pins, bolt plates, hooks and drainage pipes. Dietary refuse consists mainly of bones from large animals, some of which have been cut and/or burnt (Appendix 4). The remains of various domestic ceramics including plates, bowls, cups, jars and bottles were also recovered from the prison site. Although less numerous, various artefacts associated with prison clothing were found during excavation. These items include shirt buttons, boot lace studs and heel caps, belt buckles, leather and cloth. Artefacts indicating general activities include buckets, flower pots, clay smoking pipes, hair combs and an ink well.

9.1.03. In terms of chronology, the majority of artefactual remains were deposited between 40 and 120 years ago, although both more recent and possibly earlier artefacts have been recovered. Unfortunately, throughout the prison site, artefactual remains are poorly preserved. Most artefacts are fragmented, decomposed and/or corroded.

9.2. SOUTHERN KNOLL

TABLE 1: Artefacts excavated from the Cisterns, Incinerator and Wooden Division.

ARTIFACTS	Trench 1	Trench 2	Trench 3	Trench 4	Trench 5	Trench 6	Trench 7	Trench 8
Nail	106		7	21		87		91
Nut	2	1		1			2	1
Bolt							2	1
Screw	1							
Metal Strap	2		2					
Metal Clamp	1					1		
Wire	1					1		1
Bed Spring			1					
Jar Lid	1		2					
Tin	16					2		2
Boot Heel								1
Cap								
Boot Lace	2							
Stud								
Aluminium Bottle Tops	3	1				2		6
Aluminium Tube	1							
Alloy	3		1			2		2
Lead	1					2		
Misc. Metal	17	7	4			7		7
Metal Button						1		1
Plastic Button	2	1						
Plastic Wrapper								2
Plastic Wire	1							
Casting								
Teeth-Brush	1							
Sving								1
Cardboard								6
Leather		2						
Burnt Bone	29							10
Unburnt Bone	90	1	8	2	2	54		54
Tooth						1		
Window Glass	19	1		10	1	3		10
Bottle Glass	343	7	18	28	5	169	7	192
Glass - Other				1				
Bakelite light						1/2	1/2	
Globe Cap								
Porcelain		1	2	1	1			
Earthenware (Domestic)	5	2	3	2		4		6
Earthenware (Drainage)	1							
Ceramics				1				
Flower Pot	1	1						

9.3. FEMALE DIVISION YARDS

TABLE 2: Artefacts excavated from the Female Division Yards.

ARTEFACTS	Trench 1	Trench 2	Trench 3
Nail		23	52
Metal Strap			3
Aluminium Bottle		2	
Tops			1
Lead			1
Misc. Metal		1	
Metal Button		1	1
Plastic Wire Casing		1	
Plastic Biro Casing	1		
Cigarette Filter		1	
Clay Pipe		1	1
Unburnt Bone		1	35
Window Glass		19	20
Bottle Glass		7	7
Earthenware (Drainage)			1
Hand Brick	1	2	3
Lime Mortar		1	
Grey Mortar		1	
Slate	2	10	18
Wood		1	
Charcoal			Sample
TOTAL	4	72	142

9.4. EASTERN LAWN

TABLE 3: Artefacts excavated from the Bath House and Flush Well.

ARTEFACTS	Trench 1	Trench 2	Trench 3	Trench 4
Nail	65	492	6	5
Nut		4		
Bolt		11		
Screw		7		
Metal Strap	1	17		
Metal Clamp		1		
Metal Clip		1		
Wire	1	29		
Wire Mesh		2		
Tin	3	5	1	
Metal Washer	1	4		
Metal Hook		5		
Metal Bucket Handle		6		
Metal Bucket		3		
Boot Lace Stud		16		
Boot Heel Cap		42		
Bolt Plate		2		
Metal Tag		2		
Comb		1		
Buckle		5		
Metal Pipe		2		
Light Globe Cap		1		
Scrap Metal		4		1
Misc. Metal	5	109		4
Metal Button	2	16	1	
Plastic Button		4		
Leather		1		
Fabric		3		
Paper Label		1		
Burnt Bone		95		
Unburnt Bone	9	884	3	1
Window Glass	25	181		
Bottle Glass	26	130	6	1
Other Glass		1		
Clay Pipe	1	1		

ARTEFACTS	Trench 1	Trench 2	Trench 3	Trench 4
Porcelain	6			
Earthenware (Domestic)	7			
Earthenware (Drainage)	7		1	
Ceramic Ink Well	1			
China		3		
Flower pot				
Floor Tile				
Hand Brick	2	2	3	
Machine Brick	5	11		
Lime Mortar	5	21		1
Grey Mortar	4	29		
Slate	39	118	34	
Slate Roof Pin		1		1
Wood	5	37		
Furnace Rock		34 Sample		
Charcoal	7 Sample	136 Sample	8 Sample	46 Sample
TOTAL	206	2501	63	60

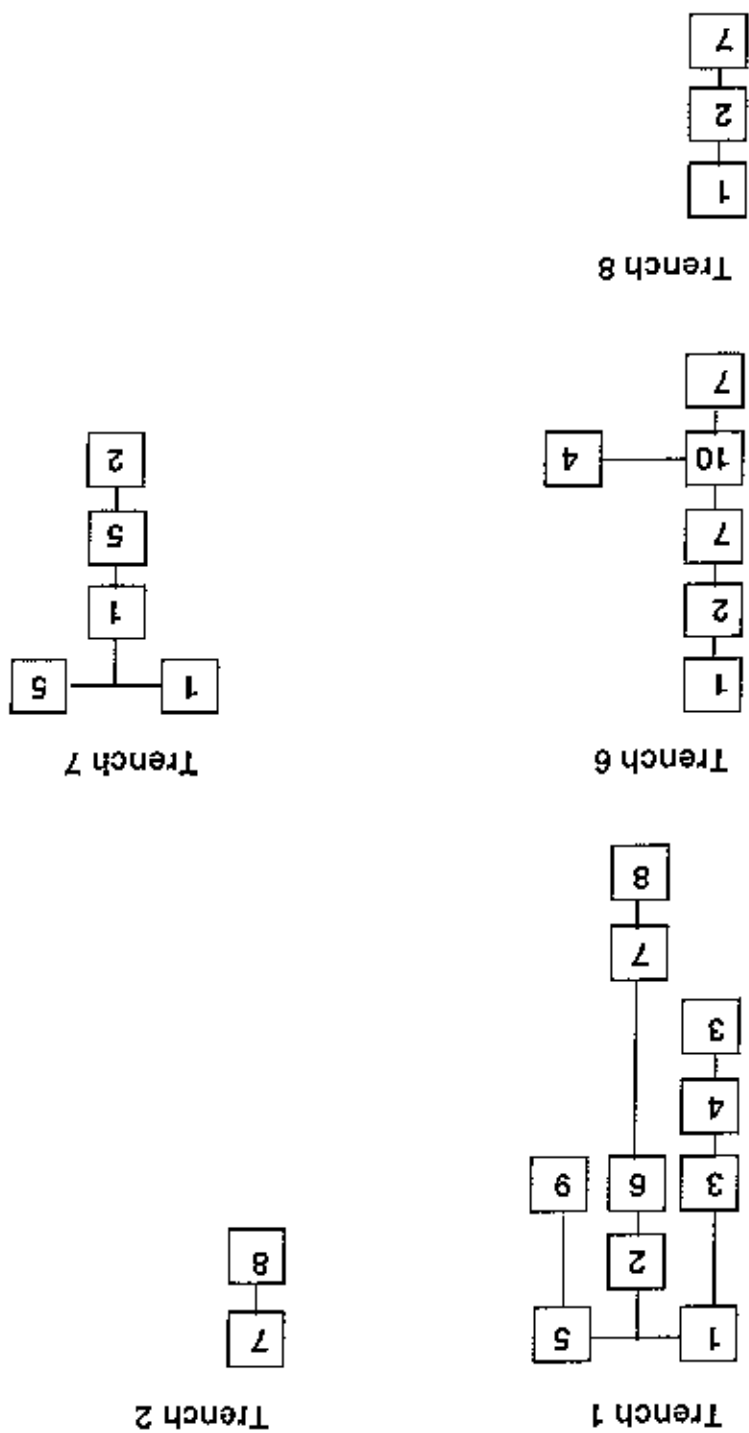
9.5. SOUTH MAIN CELL BLOCK

Table 4: Artefacts excavated from the Parade Ground.

ARTIFACTS	TRENCH
Nails	147
Bolt	1
Screw	1
Wedge	1
Wire	2
Tin	10
Metal Hook	1
Boot Heel Cap	1
Scrap Metal	2
Copper	4
Miscellaneous Metal	2
Button (Metal)	4
Elastoplast (Bandaid)	1
Unburnt Bone	20
Class Window	32
Class Bottle	44
Earthenware (Domestic)	1
Hand Brick	6
Lime Mortar	2
Slate	41
Wood	5
Furnace Rock	18 Sample
Charcoal	70 Sample
Bluman	1 Sample

10.	MATRIX CHARTS: STRATIGRAPHIC RELATIONSHIPS
10.1.	SOUTHERN KNOLL (Cisterns, Incinerator and Wooden Division)
10.1.01.	Cisterns Key:
1.	Brown Organic Soil.
2.	Black Brown Soil (containing limestone and charcoal inclusions).
3.	Grey Sand.
4.	Crushed Limestone Rubble.
5.	Yellow Sand.
6.	Tan Clay.
7.	Red Brick.
8.	Limestone Rubble and Boulders.
9.	White Ash.
10.	Lime Sand Mixture.

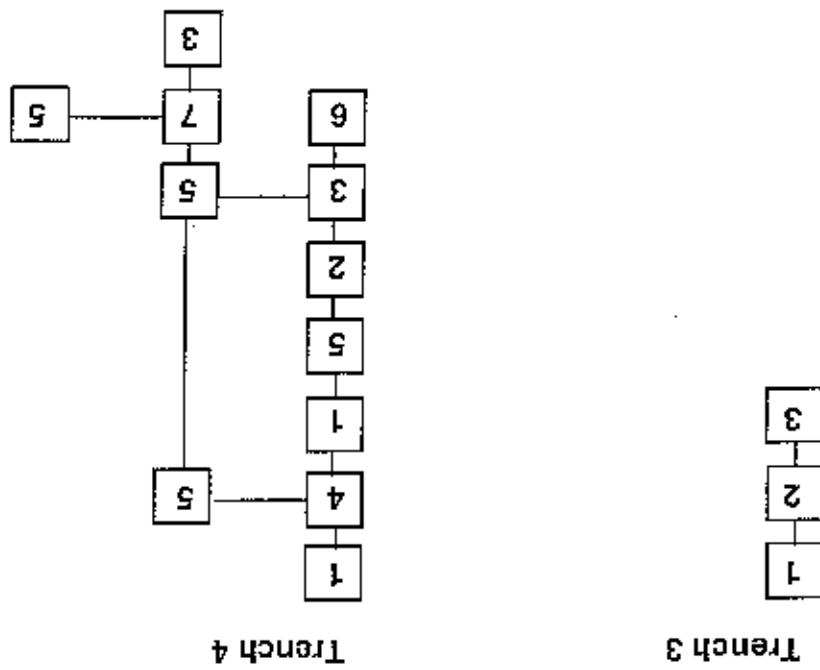
10.1.02 Matrix Charts (Cis terns)

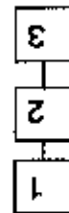


10.1.03. Incinerator Key:

- 1. Dark Brown Organic Soil.
- 2. Grey Sand.
- 3. Compact Limestone Sand and Rubble.
- 4. White Lime Clay.
- 5. Ash.
- 6. Charcoal Lens.
- 7. Bricks and Mortar Rubble.

10.1.04. Matrix Charts (Incinerator)





Trench 5

10.1.06. Matrix Charts (Wooden Division)

- 1. Brown Organic Soil.
- 2. Light Brown Soil and Lime Sand.
- 3. Limestone Sand and Rubble.

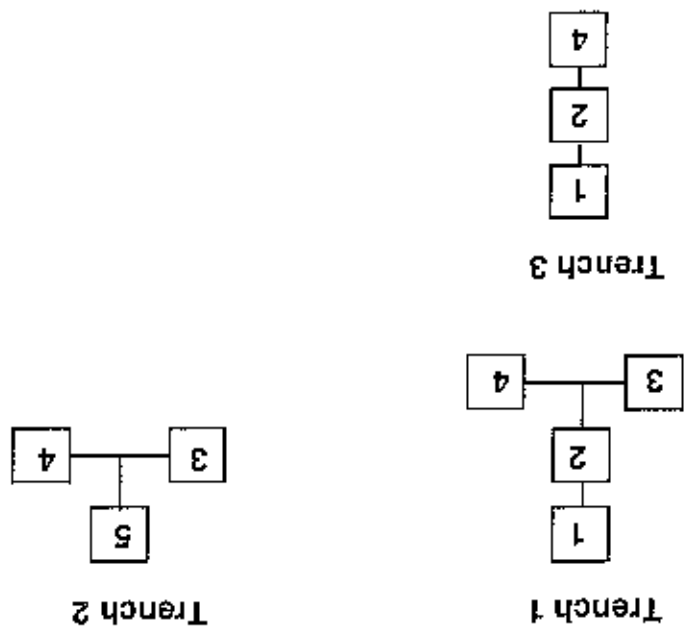
10.1.05. Wooden Division Key:

10.2. FEMALE DIVISION YARDS

10.2.01. Key:

- 1. Bitumen.
- 2. Laterite.
- 3. Yellow Sand.
- 4. Limestone Sand and Rubble.
- 5. Brown Sand.

10.2.02. Matrix Charts

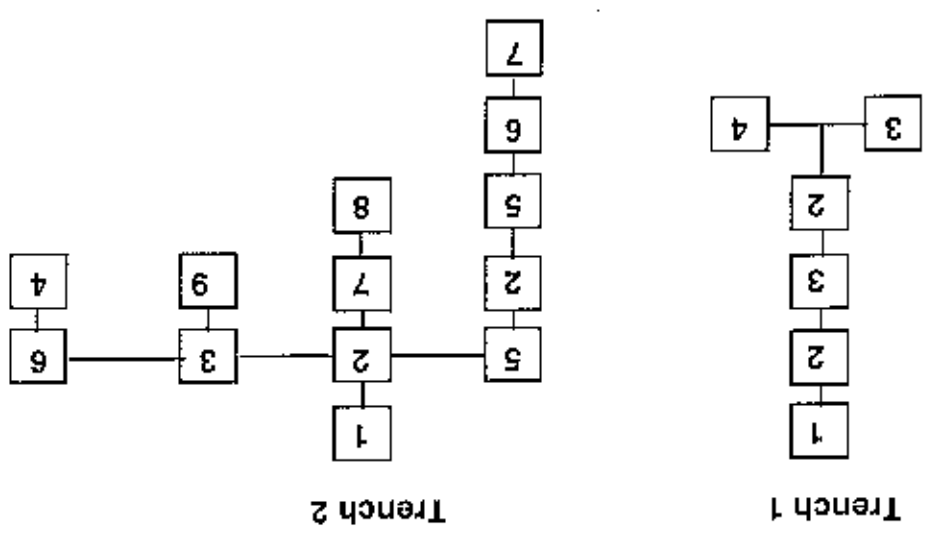


10.3. EASTERN LAWN

10.3.01. Bath House Key:

- 1. Top Soil.
- 2. Grey Brown Sand (with limestone, brick and charcoal inclusions).
- 3. Limestone Sand and Rubble.
- 4. Ash.
- 5. Yellow Sand.
- 6. Light Grey Sand.
- 7. Red Brown Clay (with charcoal inclusions).
- 8. Hearth.
- 9. Laterite Clay.
- 10. Rich Brown Soil.

10.3.02. Matrix Charts



10.4. SOUTH MAIN CELL BLOCK

10.4.01. Parade Ground Key:

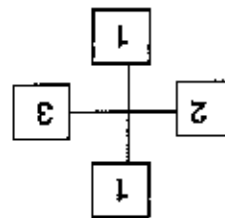
1. Rich Brown Fibrous Soil.

2. Yellow Sand.

3. Brown Fibrous Soil.


















10.4.02. Matrix Charts

Trench 1

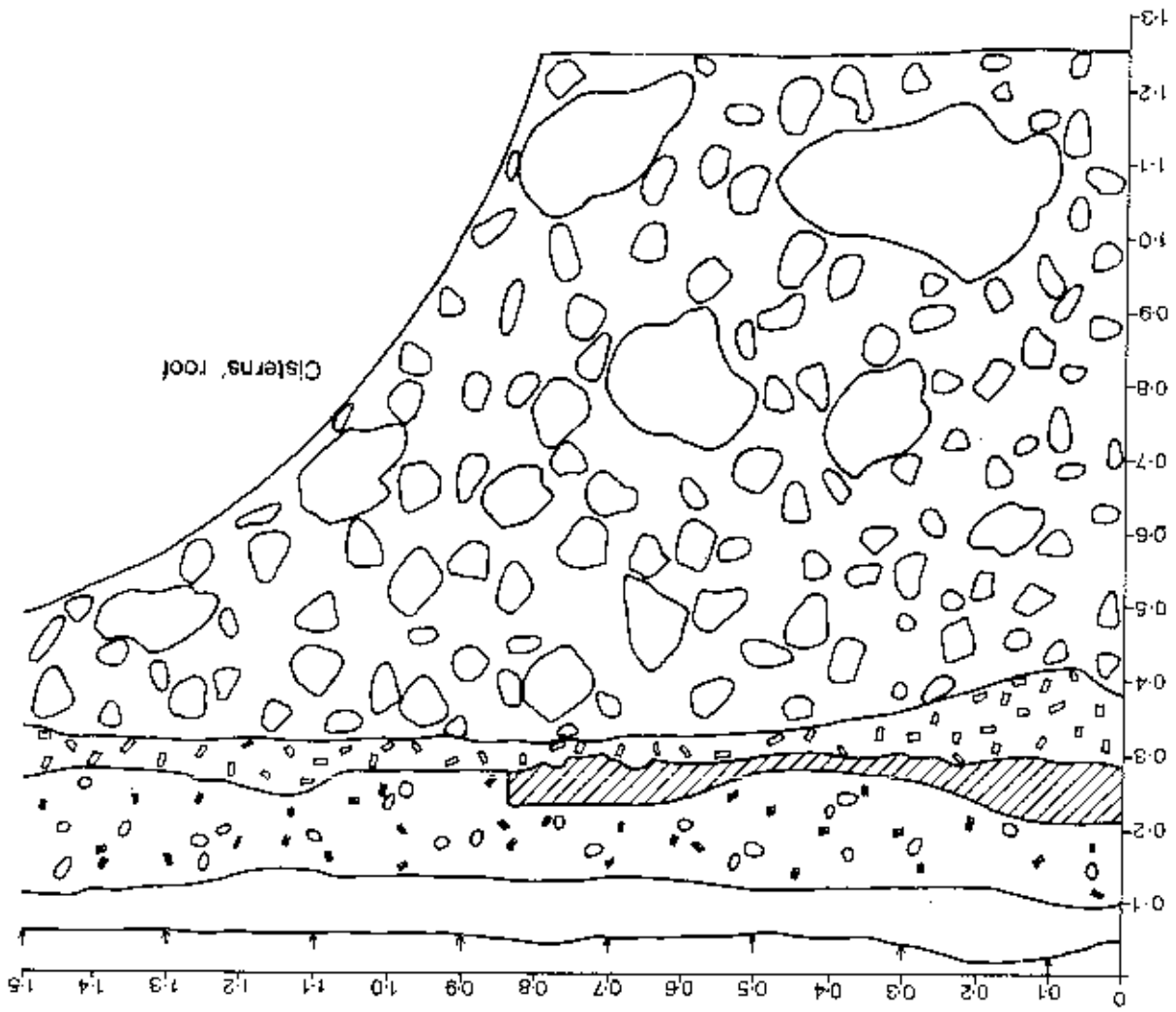
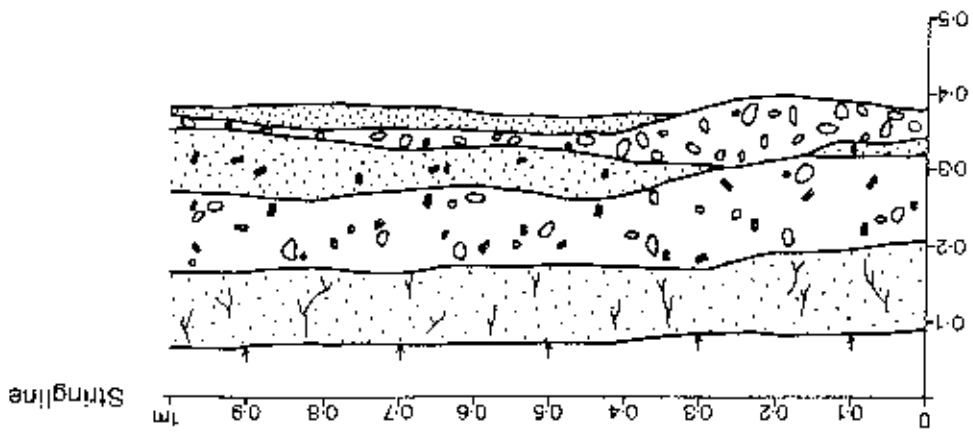


11. Section Drawings

11.1 KEY

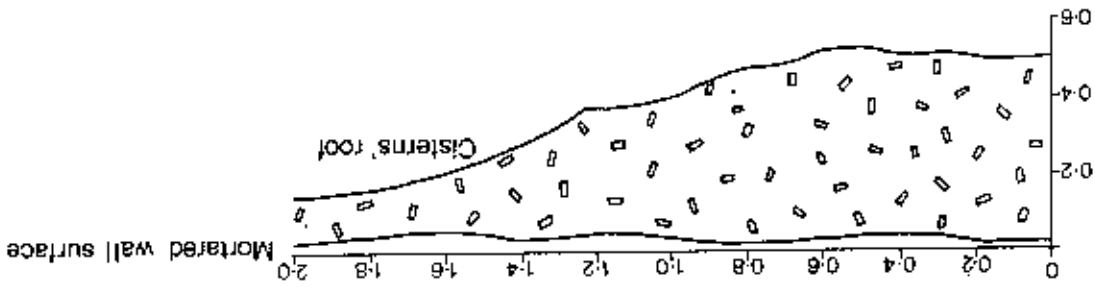
1	BROWN ORGANIC SOIL	
2	BLACK BROWN SOIL (containing limestone and charcoal inclusions)	
3	LIGHT BROWN AND LIME SAND MIX	
4	GREY SAND	
5	GREY SAND (containing limestone and charcoal inclusions)	
6	CHARCOAL LENS	
7	ASH	
8	YELLOW SAND	
9	LIME CLAY	
10	TAN CLAY	
11	CRUSHED LIMESTONE RUBBLE	
12	LIMESTONE RUBBLE AND BOULDERS	
13	DARK YELLOW SAND	
14	RED BRICK	
15	BRICKS AND LIMESTONE RUBBLE	
16	LATERITE CLAY AND PEBBLES	
17	BITUMEN	
18	RED BROWN LATERITE CLAY	

11.2 SOUTHERN KNOLL



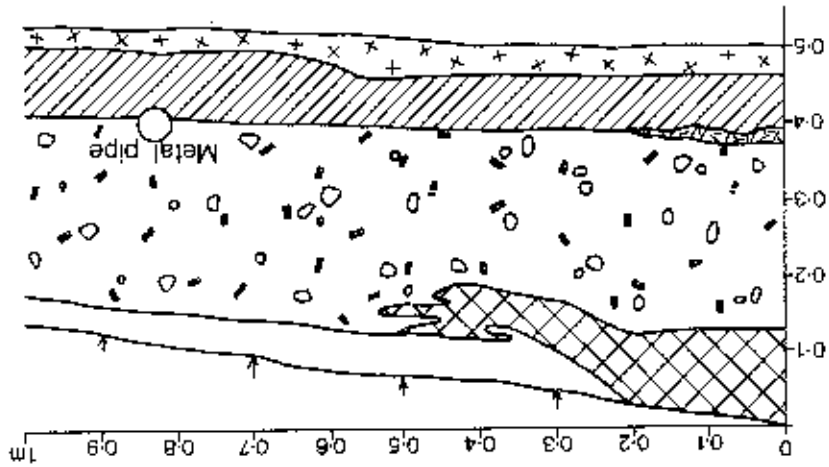
TRENCH 2 : WEST FACE

11.2.05 CISTERNS



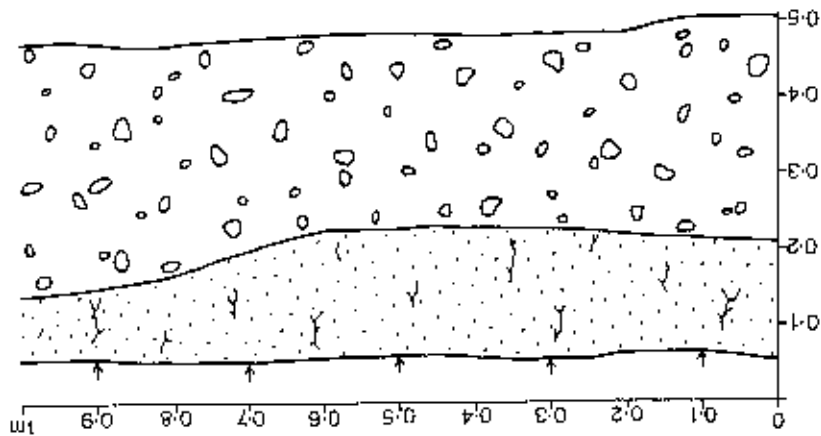
TRENCH 1 : SQUARE 4, WEST FACE

11.2.04 CISTERNS



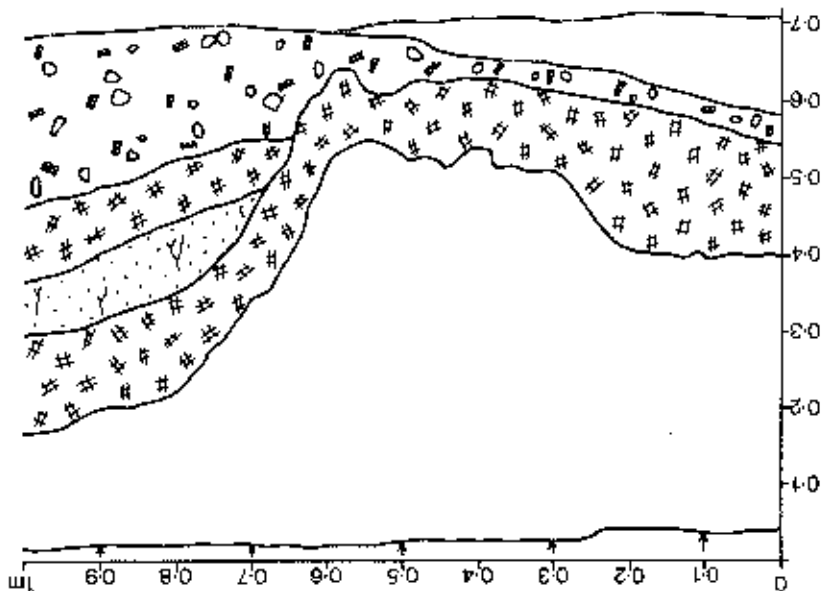
TRENCH 1 : SQUARE 3, SOUTH FACE

11.2.03 CISTERNS



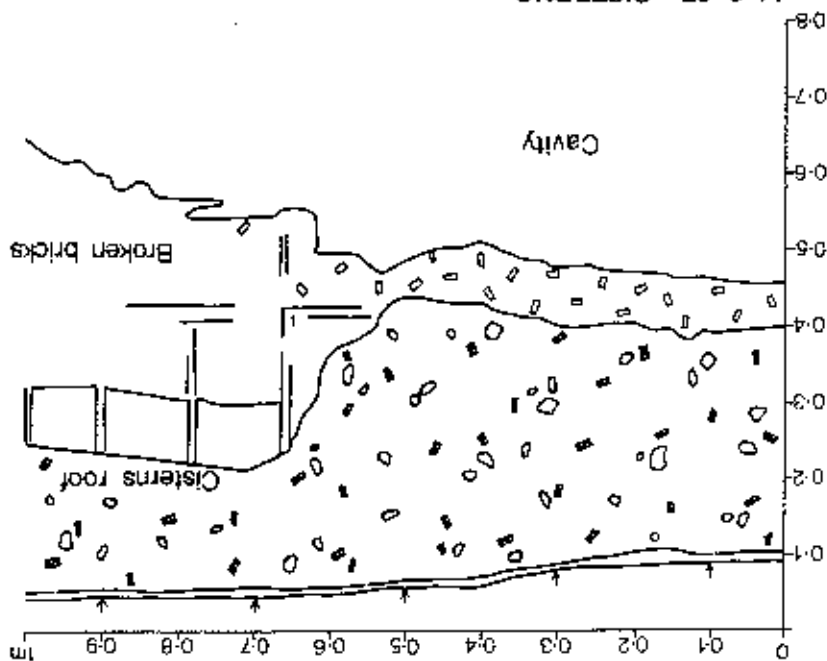
TRENCH 7: NORTH FACE

11.2.08 CISTERNS



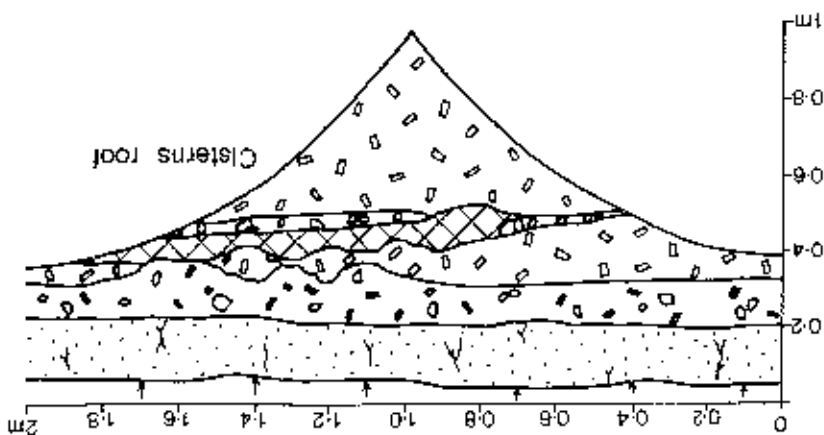
TRENCH 7: EAST FACE

11.2.07 CISTERNS

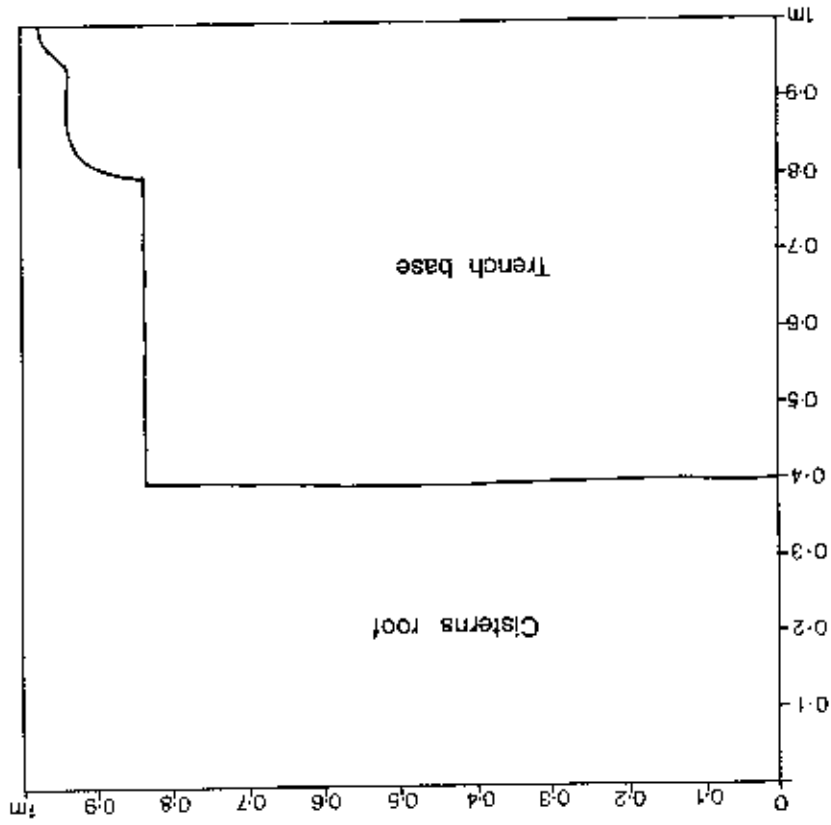


TRENCH 6: WEST FACE

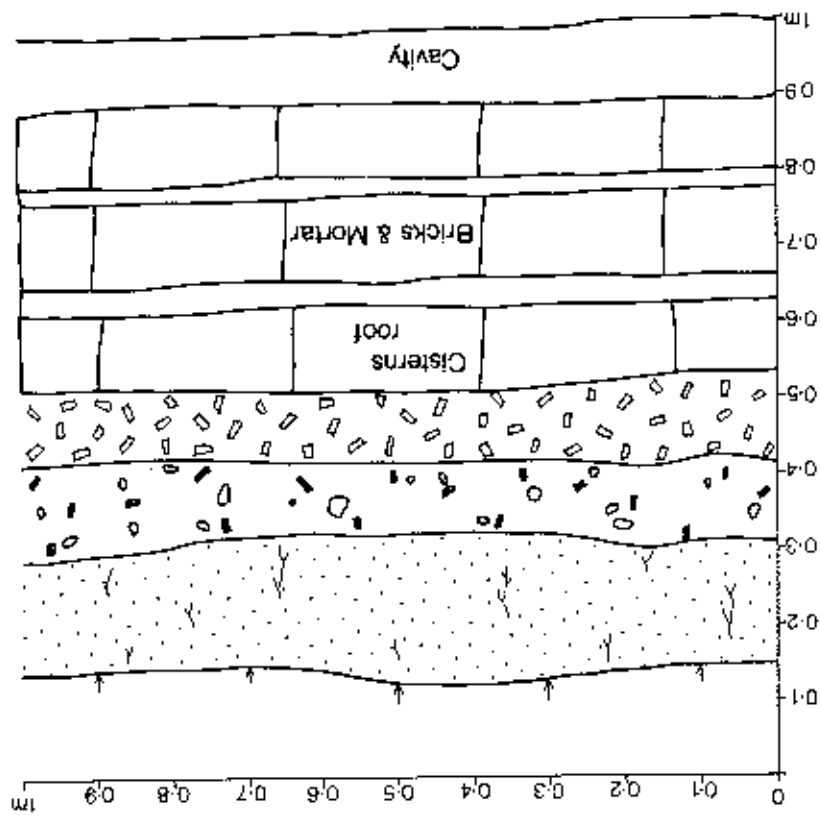
11.2.06 CISTERNS



11.2.10 CISTERNS
TRENCH 8 : PLAN

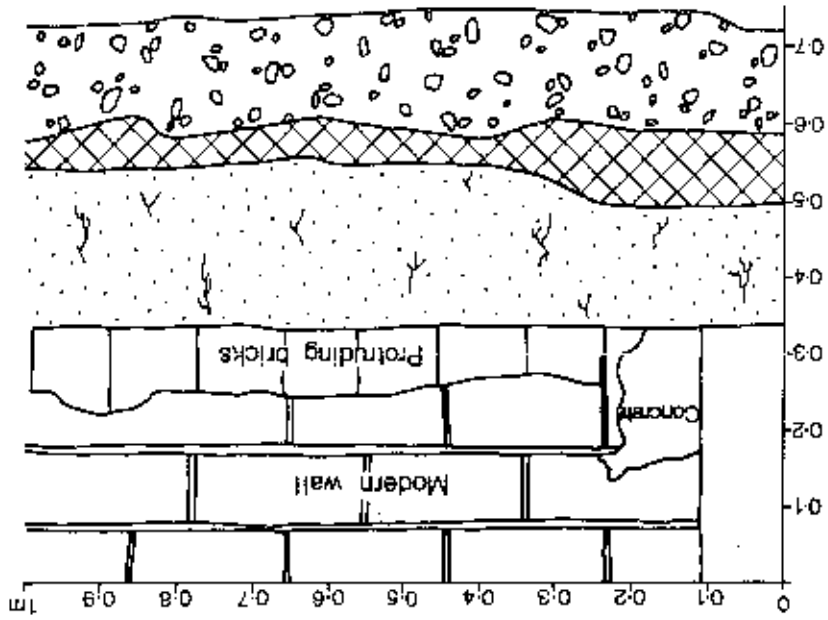


11.2.09 CISTERNS
TRENCH 8 : SOUTH FACE



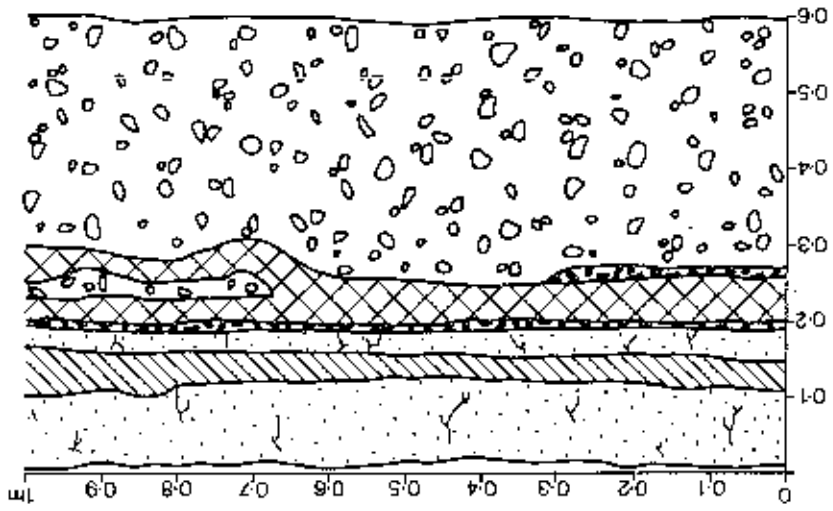
TRENCH 5 : NORTH FACE

WOODEN DIVISION 11.2.13



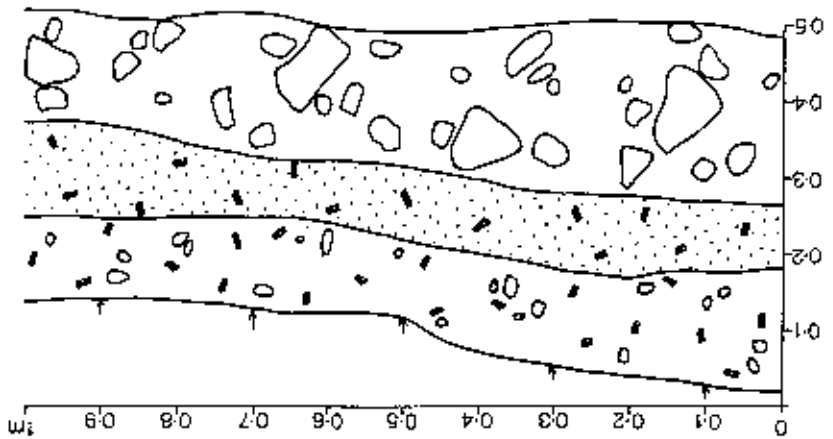
TRENCH 4 : WEST FACE

INCINERATOR 11.2.12



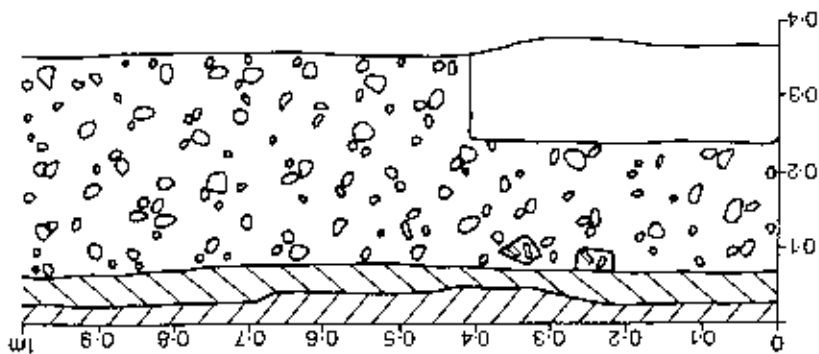
TRENCH 3 : NORTH FACE

INCINERATOR 11.2.11

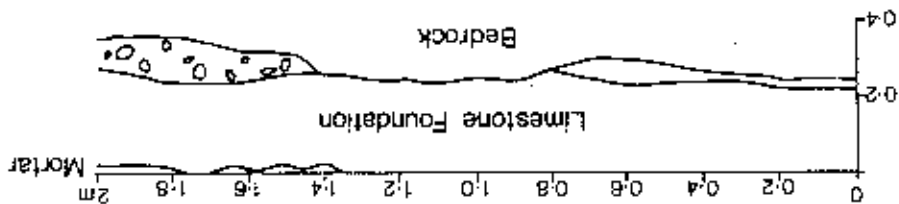


11.3 WOMENS' PRISON YARDS

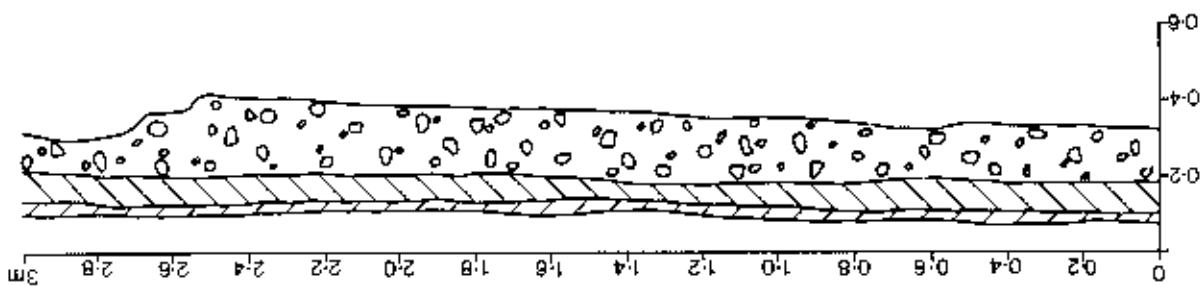
11.3.01 NORTHERN YARD
TRENCH 1 : NORTH FACE



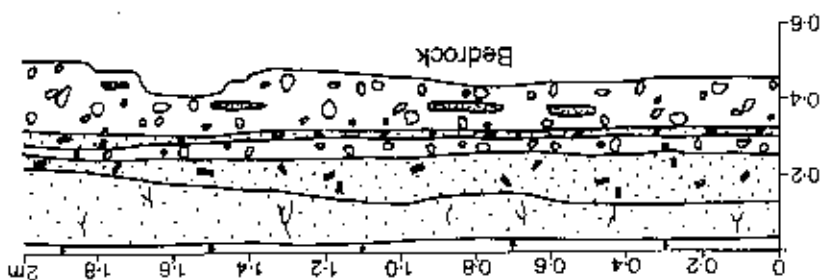
11.3.02 NORTHERN YARD
TRENCH 2 : WEST FACE



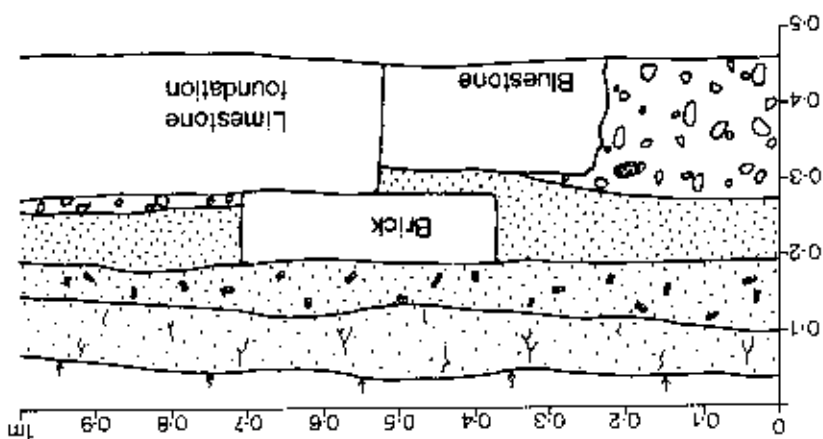
11.3.03 SOUTHERN YARD
TRENCH 3 : SOUTH FACE



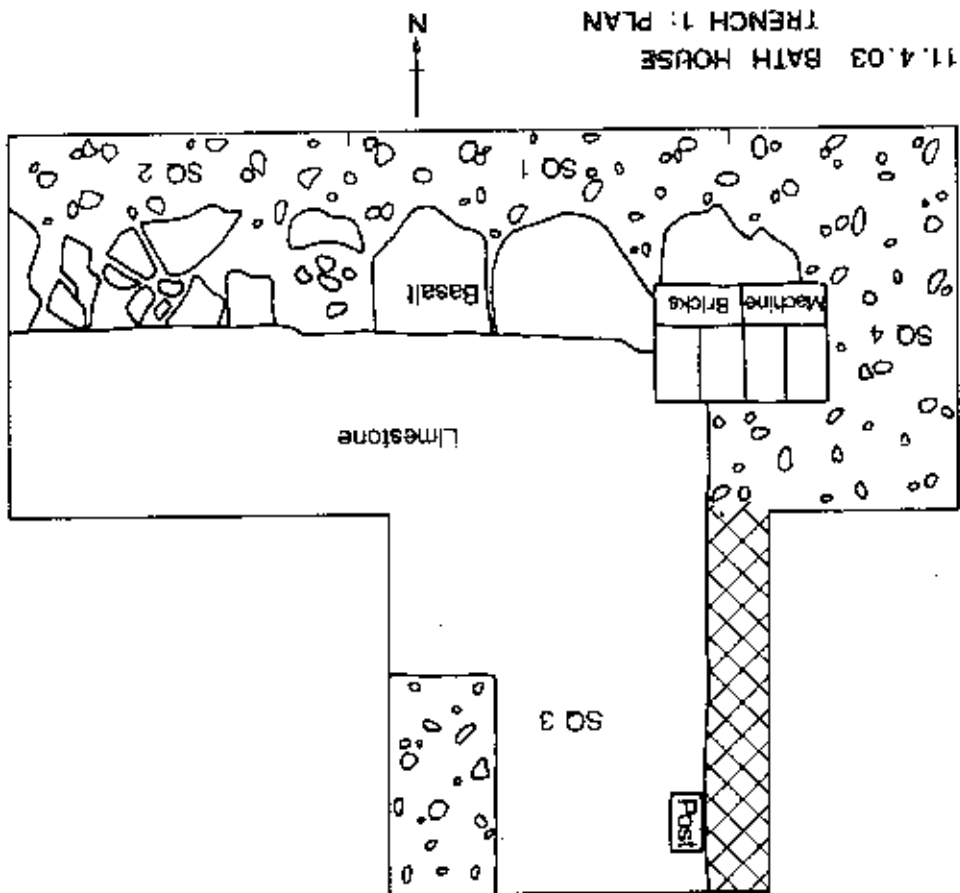
11.4 EASTERN LAWN



11.4.01 BATH HOUSE
TRENCH 1: NORTH FACE

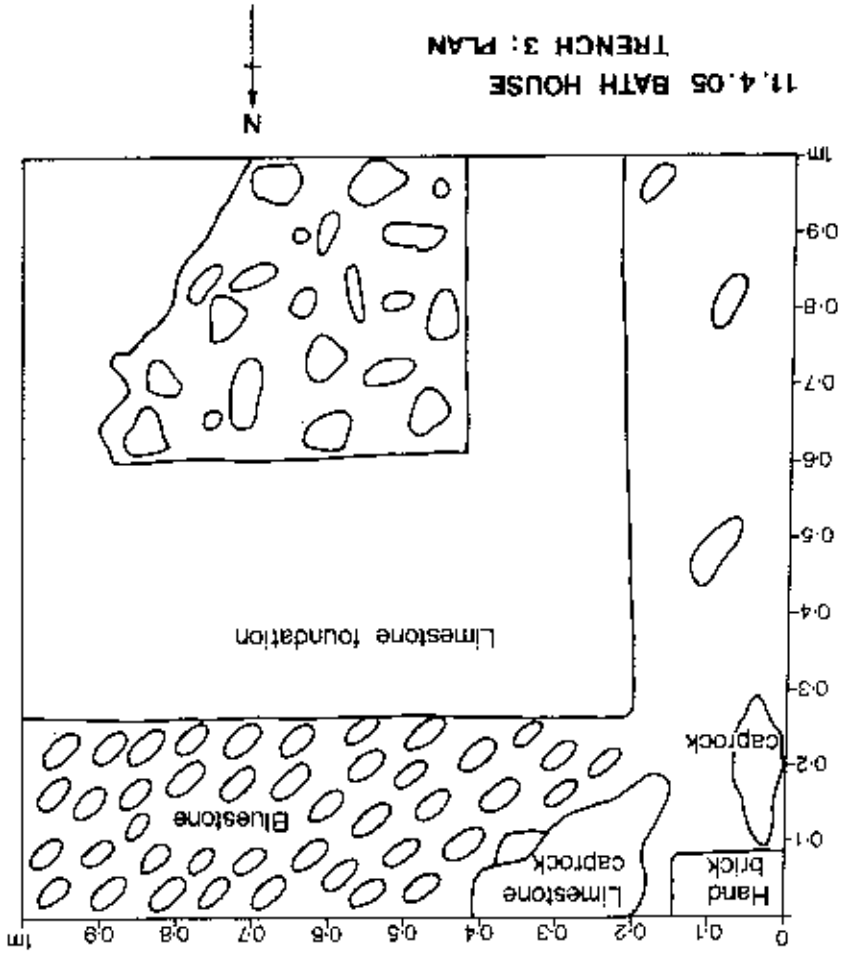


11.4.02 BATH HOUSE
TRENCH 1: EAST FACE

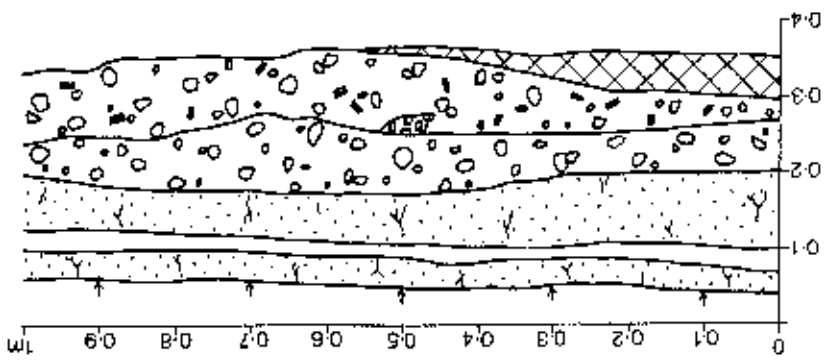


11.4.03 BATH HOUSE
TRENCH 1: PLAN

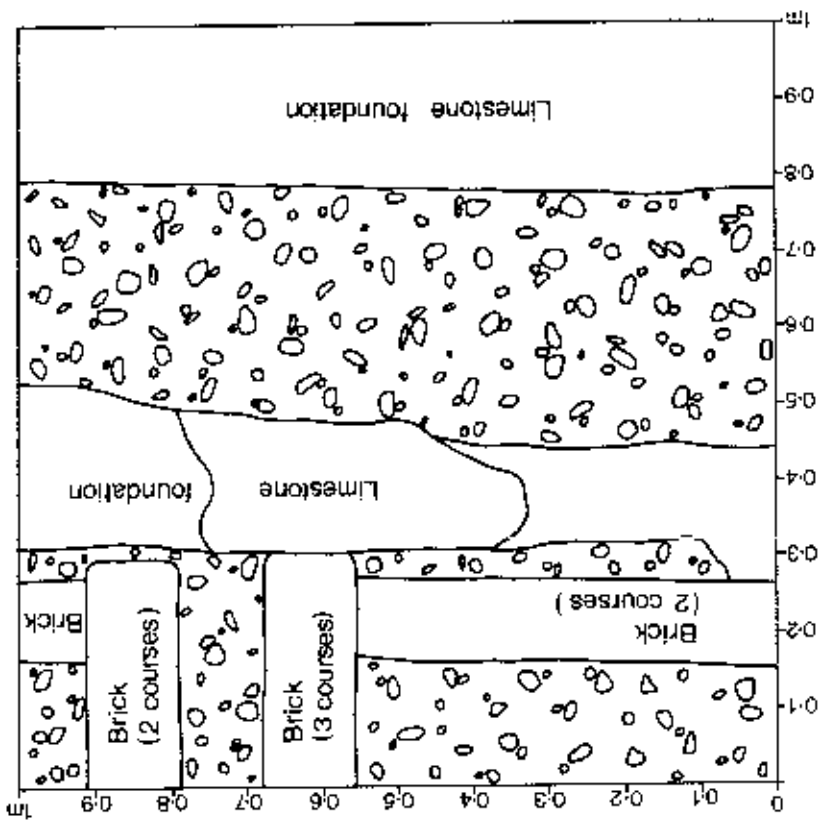
11.4.05 BATH HOUSE
TRENCH 3: PLAN



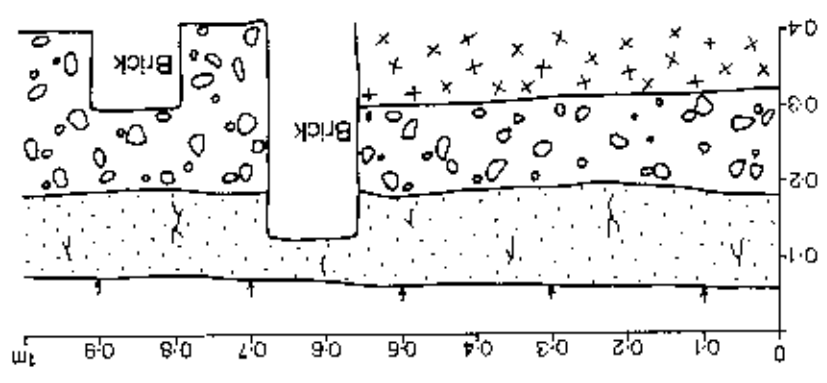
11.4.04 BATH HOUSE
TRENCH 3: WEST FACE



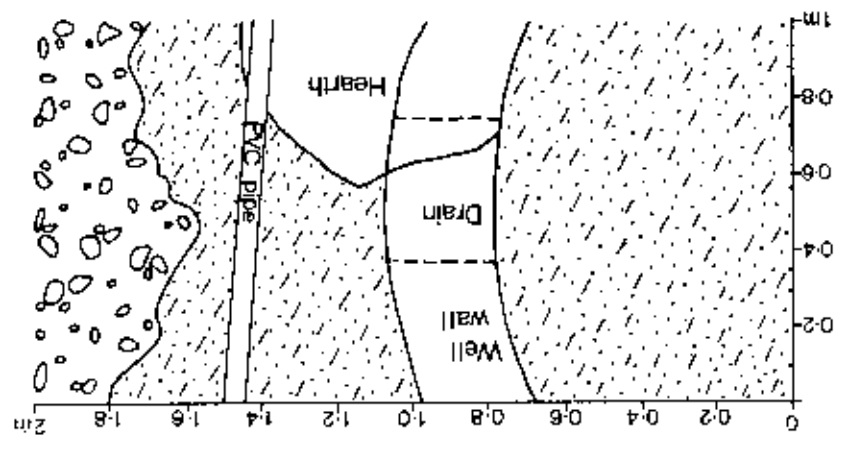
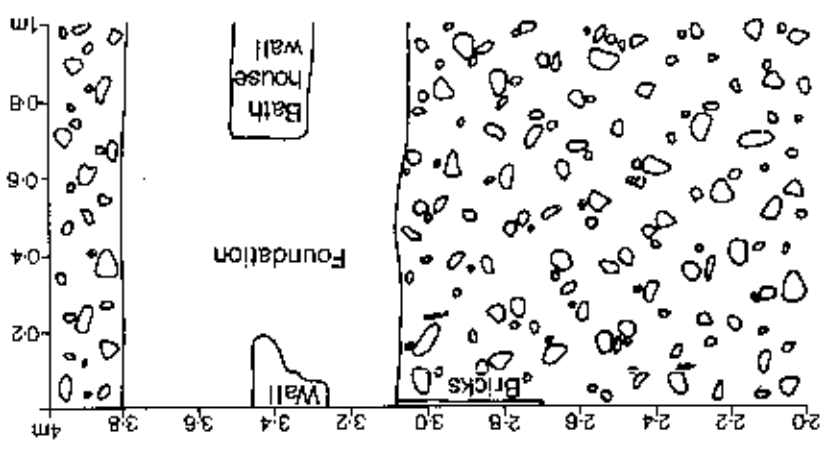
11.4.07 BATH HOUSE (BATHS)
TRENCH 4: PLAN



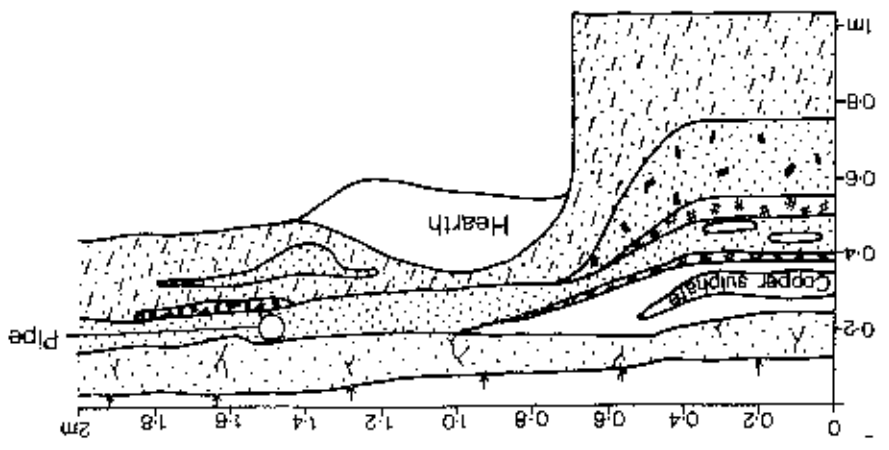
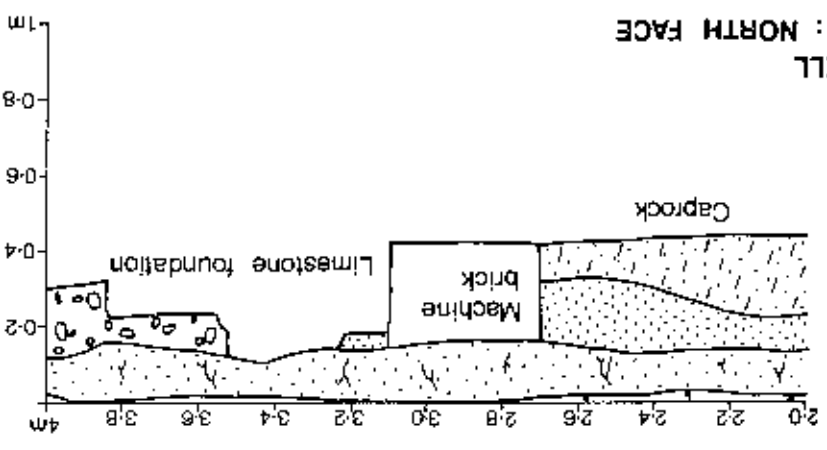
11.4.06 BATH HOUSE (BATHS)
TRENCH 4: EAST FACE



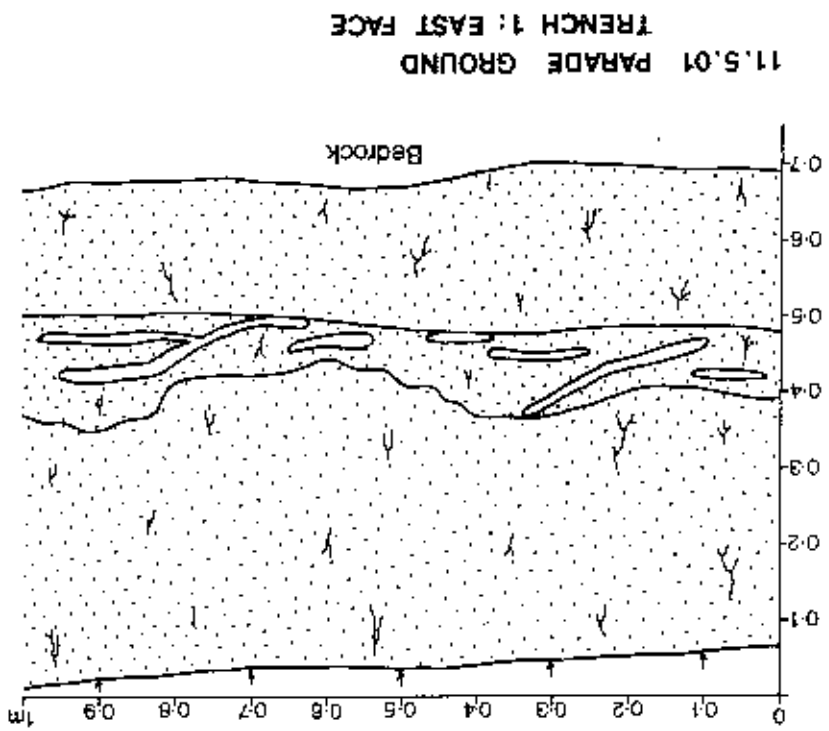
TRENCH 2: PLAN
11.4.09 FLUSH WELL



TRENCH 2: NORTH FACE
11.4.08 FLUSH WELL



11.5 FRONT OF SOUTH MAIN CELL BLOCK



13. ANALYSIS AND CONCLUSIONS

13.1. INTRODUCTION

13.1.01. Substantial and varied archaeological remains have been excavated in the Fremantle Prison Compound. These remains include the foundations of a bath house, cisterns and a range of artefacts. Both the structures and artefacts may be used to address a number of research questions discussed in the Stage One Report of the archaeological programme (Bavin 1990). Questions which may be addressed in this report relate to:

- Institutional self-sufficiency in terms of imports and prison products;
- Diet and health;
- Structural developments and occupational phases associated with particular buildings;
- An accuracy assessment of early prison plans based on location of structural remains uncovered during excavation.

13.2. PRISON PRODUCTION

13.2.01. Most construction activities in Fremantle Prison, including the construction of Main Cell Block, were carried out by prison labour. A large portion of artefacts recovered from all the sites excavated in the prison compound consist of building materials. Many of these items appear to have been manufactured in the prison. Roughly forged nails and bolts were found in lower deposits along with scraps of metal, including lead, tin, copper and iron, wire ties and furnace waste from the metal workshop. Mortar floor tiles bearing no makers marks were also found. Whoever made the tiles provided the mortar that was used on the Cisterns and Bath House. A distinctive lime grey mortar was used in all these production processes.

13.2.02. The popular image of convicts breaking rocks may well be incomplete. It appears that prisoners in Fremantle Gaol not only cut and transported limestone, they manufactured the nails, bolts, iron frame straps, and wire ties which to build their own accommodation. They covered floors with mortar tiles and rendered walls with the same mortar mix.

13.2.03. Prison production did not end with building activities. Non-construction items manufactured in the prison were also recovered during excavations. These items include boot heel caps and lace studs, belt buckles, a rough metal comb and two metal 'dog' tags. It appears that prisoners forged parts of their own footwear and clothing accessories in the metal workshop. The 'dog' tags are unusual items that were possibly worn around inmates' necks for identification purposes. One tag is inscribed with the number '60'. Leather may also have been cured in the prison given that animals were kept in the precinct (pers. comm. J.F. Mitchell), and a large amount of animal bone and a couple of pieces of leather were recovered. The leather may well have been part of a boot.

13.2.04. Prisoners did not go so far as to manufacture their own shirt buttons. Numerous shirt buttons were retrieved from various stratigraphic levels in all

sites excavated within the prison. Most of the buttons were metal and have been inscribed with various makers marks. In more recent deposits a few plastic buttons were found. A few fragments of fabric were also recovered. This material, however, is too decomposed to determine its use and origin.

13.2.05. Bottles, jars, flower pots, buckets, bed springs, clay pipes, ceramics and particular building materials were also imported into the prison. Most imported items were probably manufactured in the Swan River Colony. Some bottles, jars and machine bricks, for instance, bear local makers marks. Metal buckets were issued to the prison prior to 1940 (pers. comm J.F. Mitchell) and slate, used as roofing material, was not available locally. Other items have been imported from Britain. Several clay pipes, for example, were manufactured in Glasgow. Some glazed earthenware was manufactured by Wedgewood, England. Although other pieces of ceramics, including hand painted china, porcelain and an ink well, have no makers marks, their appearance and design is similar to other ceramics imported from Britain.

13.2.06. These items would have been purchased from outside the institution for convenience or due to a lack of production facilities within the prison. It is unlikely that inmates did not have the time to manufacture such items. Although the prison received government funding (W.A. Blue Books), excavated materials suggest that to a large extent the institution was attempting to be self sufficient. During the mid 19th Century, reformers and religious authorities abroad were promoting a productive 'work ethic' as a means of rehabilitation in many penal institutions. Production activities in Fremantle Prison may have been inspired by these debates or, alternatively, by inadequate government funding.

13.3. DIET

13.3.01. A large portion of the Fremantle Prison artefact collection consists of animal bone. These are the only dietary remains recovered during excavations. The substantial amount of bone dispels the popular image of a salt meat, bread and water prison diet. Bones from both large and small animals occur in both lower and upper deposits throughout the site. It appears that since the mid 19th Century inmates were provided with fresh meat, including chicken, lamb or mutton and possibly beef. The dietary remains were then buried or burnt and distributed over the prison site along with other incinerator waste.

13.3.02. In 1837 the standard prison diet consisted of bread and vinegar. Salt meat was issued to prisoners engaged in daily labour or on good behaviour (W.A. Blue Book 1837:172). By 1850 a basic prison diet included flour, salt meat, tea and sugar (less 1/4 lb. of meat being supplied to Aboriginal prisoners) (W.A. Blue Books 1840 - 1850). In 1855 the first prisoners were housed in Fremantle Prison. These prisoners received flour, salt meat, tea and sugar as well as potatoes (W.A. Blue Books 1855 - 1870). By 1870 the prisoners' diet expanded to incorporate pepper and soda. Excavation results indicate that inmates in Fremantle Prison were provided with some fresh meat during the early years of Fremantle Prison. A photograph of a vegetable garden on the Southern Knoll also indicates that prisoners had access to fresh

vegetables in 1916 (Draw: no date; Plate 1), though potatoes are the only vegetable specifically mentioned in the W.A. Blue Books (1870's). Unfortunately, individual case studies are not archaeologically visible. However, the supply of fresh meat to the prison and the cultivation of fresh vegetables in the prison during the 19th and early 20th Centuries suggests that the health of prisoners was considered to be important by prison administrators.

13.3.03. Several bones removed from the site have been cut. They indicate that larger animals were prepared by cutting or chopping the meat into small portions. Pre-cut portions may have been supplied to the prison or cut in the prison kitchen. The portions would then have been distributed as part of a main meal.

13.3.04. Additional artefacts indicate dietary practices, as opposed to dietary content. A variety of ceramics, including plates, bowls, cups, jars and bottles, were also recovered from the prison site. Although the majority of plates, bowls and cups are thick with a plain glaze, some ceramics have been hand painted and others were imported from Britain. Some of the paintings depict garden scenes. Bottles and jars were brought in from outside the prison, including numerous milk bottles. Curiously, a large amount of glass appears to be from broken alcohol bottles, particularly those containing beer and wine. One of these bottles is approximately a century old as indicated by its texture and pontil.

13.4. STRUCTURAL DEVELOPMENTS AND OCCUPATIONAL PHASES

13.4.01. Dietary remains, in the form of bone, were uncovered in the southern yard of the Female Division. This area was once a yard outside the kitchen complex and appears to have been a minor depository for refuse. The refuse includes some bone, a clay pipe, a metal button and bottle glass. However, most artefacts removed from this site were building materials, including window glass, hand and machine brick, slate and slate pins, timber, bolt plates, hooks and drainage pipes. Consequently, it is difficult to outline the transition of the site from a Kitchen Yard to a Female Division Yard.

13.4.02. Of the buildings investigated in this report less substantial structures, such as Wooden Division, were completely demolished and their construction materials recycled. Buildings which were occupied or used by prisoners, such as the Bath House, were repaired to maximize their use before their final demolition. Facilities, such as the Cisterns, were simply filled and covered once their function became obsolete. On the Southern Knoll and Eastern Lawn successive garden layers were deposited over demolished or filled buildings.

13.5. PRISON PLAN ACCURACY

13.5.01. Prison plans used in this report may be assessed according to the location of excavated structural remains. The earliest plan, Plan of Fremantle

Prison (P.W.D. c.1908), shows the location of an incinerator by the southern boundary wall of the prison. No archaeological evidence was recovered which supported the presence of an incinerator at this location. Furthermore, measurements calculated from the Plan of Fremantle Prison vary from other plan measures by at least 1m (P.W.D. c.1910). Consequently, the plan appears to be fairly inaccurate in terms of both structure location and scale.

13.5.02. The Fremantle Prison Drainage Plan (P.W.D. c.1910) shows a set of cisterns on the Southern Knoll and a Bath House on the Eastern Lawn. Fremantle Gaol (P.W.D. 1951) also includes a plan of the Bath House. Distances calculated from these plans deviate by up to 0.4m on the Southern Knoll and 0.89m on the Eastern Lawn according to excavation results.

13.5.03. Prison plans indicate that most building alterations occurred in high activity residential or work areas. Features indicated on plans, however, were not always constructed. For example, excavations revealed that the 'earlier walls' in the southern yard of the Female Division were never built (B.M.A. Plan; Fremantle Prison Assessment Centre and Workshops 1989).

13.6. CONCLUSION

13.6.01. Excavations in the Fremantle Prison Compound have yielded material evidence of prison diet, production and self sufficiency, construction activities, waste disposal and general activities such as smoking and gardening. The majority of artefacts representing these activities were made and/or used between 1870 and 1950. The general character of the artefact assemblage is consistent within and between sites. It is fragmented and dominated by construction materials, bottle glass, ceramics and bone. Most deposits within the prison site have not been disturbed and some structural remains are intact. Although one may expect waste disposal to have been thorough within penal institutions for security purposes, the entire grounds of Fremantle Prison appear to have been used as a refuse depository.

14. CULTURAL SIGNIFICANCE

14.1. INTRODUCTION

14.1.01. Excavations in the Fremantle Prison Compound demonstrate that the prison is an archaeologically sensitive area and a valuable scientific resource. A variety of archaeological remains have been uncovered. These include substantial structural remains and artefactual deposits which can be related to significant research questions. Physical evidence excavated in Fremantle Prison can provide information on penal institutions in terms of administration, inmate employment and leisure activities, imports and self sufficiency, construction activities, diet and waste disposal.

14.1.02. Fremantle Prison is a well documented site. However, many of the subjects listed above are not adequately represented in historical documents. Physical investigations in this report indicate that a variety of questions may be answered from archaeological remains. The site has potential for archaeological research which may also be useful to other disciplines, such as architecture, criminology, history and engineering.

14.1.03. Archaeological sites within and including Fremantle Prison are physical expressions of colonial development, organization, administration, social control, notions of justice, punishment and reform, social ethics and human behaviour. As such, the site is extremely significant in terms of scientific research and public interest.

14.2. SOUTHERN KNOLL

14.2.01. The Cisterns (1857) operated as a reservoir for the storage and distribution of water throughout the prison until about 1897. The site is historically significant and representative as the first major construction for supplying the prison with fresh water. Before the Cisterns were constructed, water was extracted from deep wells in the grounds of the prison. The Cisterns are also significant in that they represent the water supply system which preceded the construction of larger Cisterns in 1897 and a unique water supply system, undertaken in 1875, which utilized extensive tunnels and drives. This later system supplied not only the prison but the entire town of Fremantle.

14.2.02. Significance may be attributed to the Cisterns site for a number of additional reasons. Excavation of this site has provided construction details which are not included on prison plans. Information has also been obtained about demolition procedures within the prison. This information concerns a lack of reuse of building materials, dry-filling as opposed to demolition and space conservation or land reuse in the form of massive land filling episodes. Artefactual evidence of incinerated waste disposal and distribution over the site was also recovered. Remains from the incinerator and general discarded artefacts have provided information on diet, clothing and other items manufactured or issued within the prison. Finally, because the Cisterns remain intact the site has major display value.

14.2.03. The Incinerator site is also located on the southern Knoll. This site is not considered to be archaeologically significant. Evidence in this site is too sparse to enable comments about the structure of waste disposal units and their contents. It is clear that food and other refuse was burnt and scattered over a wide area of the prison. However, this evidence does not come from the Incinerator site.

14.2.04. The site of Wooden Division is also not considered to be archaeologically significant. Although Wooden Division is historically significant, in terms of prison overcrowding and temporary accommodation, very few artefacts were recovered from this site and no structural remains were located.

14.3. FEMALE DIVISION YARDS

14.3.01. The old Kitchen Complex (1854) was converted into a Female Division in 1889. As such, the site is unique to the Fremantle Prison Compound. It provides a rare opportunity to compare differences in the behaviour and treatment of prisoners based on gender. Although no structural remains were uncovered in this site, the Female Division Yards are considered to be significant on the basis of artefactual remains. Artefacts removed from the Female Division provide information on diet, items manufactured or issued in the prison, construction materials, and the leisure activities of prisoners who have been segregated according to their gender.

14.3.02. Dietary remains may also be associated with an earlier phase of occupation when the building was a kitchen and Laundry. However, further artefact analysis is required to refine the chronological framework in this site. Once this has been achieved deposits in the Female Division Yards will allow a comparison of occupational phases and functional changes within the building.

14.4. EASTERN LAWN

14.4.01. Substantial remains of a Bath House and flush well (1856) were uncovered on the Eastern Lawn. Most of the building has been demolished. However its foundations, features within the building, and the well are intact. This demonstrates that demolition practices within the prison varied. Although the Bath House may stand as a monument to organized hygiene within a 19th Century prison, it also details a flushing system designed to remove bath water from the building.

14.4.02. Additionally, a wealth of artefactual material was retrieved from beside the well. It is likely that further deposits will be found in the well if it is excavated further. Time and finances limited excavations in this area. These artefacts have provided a great deal of information on clothing, diet and kitchenware, waste disposal, items manufactured or issued within the prison and general activities which ranged from smoking pipes to gardening. The Bath House and well are considered to be extremely significant sites and valuable research resources. The site is also considered to be significant due to the extent of structural remains and their display value.

14.5. FRONT OF SOUTH MAIN CELL BLOCK

14.5.01. Results from excavations in front of South Main Cell Block suggest that the existing metalled road is the same as that constructed in 1862. This may be confirmed by monitoring redevelopment works if they take place in front of South Main Cell Block. Stratigraphic sequences have been recorded at this site and no substantial artefact deposits were uncovered. Having acquired the above information, no further archaeological potential appears to exist for the site. Consequently, the area in front of South Main Cell Block examined in this report is not considered to be significant.

15. CONSERVATION AND MANAGEMENT RECOMMENDATIONS

15.1. INTRODUCTION

15.1.01. Areas within the Fremantle Prison Compound are non renewable archaeological resources and as such they must be protected. No significant archaeological remains should be threatened by redevelopment works in the Fremantle Prison Compound.

15.2. RECOMMENDATIONS

15.2.01. The following recommendations for conservation and management are in accordance with the Burra Charter of Australia, ICOMOS. They are presented for the protection of archaeological remains and as a guide for site managers so that the site may retain its cultural significance.

15.2.02. A safe storage place must be established for artefacts recovered from the site. The organization of a central archaeological data base would also be useful to those requiring access to information. Within this data base all archaeological reports, plans, slides, and other documents may be stored.

15.2.03. All artefacts have been bagged and labelled according to a standardized accessioning system. These details should be entered into an artefact register book. The system recommended includes: 1. artefact number, 2. accession date, 3. excavator, 4. site title, 5. site number, 6. trench number, 7. split number, and 8. provenance. It is not recommended that artefacts be removed from their bags unless the individual artefacts have been labelled. An artefact alone cannot reveal much information.

15.2.04. Information may be conveyed to the public in the form of displays of structural remains, artefacts, photographs and brief explanations located on site and in the Fremantle Prison Museum.

15.2.05. Sites should not remain exposed unless threatened by development works or for a specific purpose such as display or research. In such cases the site should be adequately protected from natural or human disturbance.

15.2.06. Those sites scheduled for redevelopment should undergo further archaeological assessment in accordance with requirements specified in the Archaeological Zoning Plan (Bavin 1990:4.1-4.4). Specifically, areas which have been classified as archaeologically sensitive (Zones A and B) should be thoroughly investigated by a professional archaeologist prior to development activities and those areas known to contain significant archaeological remains should be avoided by developers. Major redevelopment works are not recommended in those areas known to contain substantial archaeological remains (Appendix 1).

15.2.07. An archaeologist should be consulted before further B.M.A. works are contemplated within the prison compound, as to the need for that work to

be monitored by an archaeologist, or for more detailed archaeological work to be carried out.

15.2.08. Future archaeological research should be carried out by qualified archaeologists such that it meets both academic and conservation requirements.

BIBLIOGRAPHY

- Bavin L.J. 1987 Behind the Facade: The Expression of Status and Class in Material Culture. (Unpublished honours thesis, LaTrobe University).
- Bavin L.J. 1990 Fremantle Prison Conservation and Future Use: Archaeological Zoning Plan of the Prison Compound. (Centre for Prehistory, University of Western Australia).
- Bosworth, Michael 1990 The Fremantle Prison Project: Female Division, Version 2 (Building and Management Authority, West Perth).
- Drew, John No Date Renological Reform in W.A.
- Kerr, James Sempie 1990 Fremantle Prison: Notes for the preparation of a conservation plan. (Building Management Authority, West Perth).
- McIlroy, Jack 1989 Historical Archaeological Assessment of Hampton Road Reserve and the Rear of Henderson Street Cottages. (Building Management Authority, West Perth).
- Pearson, Michael 1984 Report of an investigation into the Historical Archaeological Resources of the Arthur Head Area, Fremantle (Centre for Prehistory, U.W.A.)
- Wilson, G. and Sands, P. 1981 Building a City: 100 Years of Melbourne Architecture. (Oxford University Press, Melbourne).
- W.A. Blue Books: Records from the Colonial Government (1837-1880).

Plans:

P.W.D.	c1908	Plan of Fremantle Prison
P.W.D.	c 1910	Fremantle Prison Drainage
P.W.D.	1951	Fremantle Gaol
B.M.A.	1987	Fremantle Prison Site Plan
B.M.A.	1989	Fremantle Prison Assessment Centre and Workshops

4.1. INTRODUCTION

4.1.01. The purpose of the Archaeological Zoning Plan is to classify sites according to their level of archaeological sensitivity. To assist managers in site development decisions the plan includes basic management recommendations. Areas in which material remains of historical or archaeological research interest are likely to have survived and seem to be highly sensitive to development activities which would disturb subsurface deposits are allocated the top zoning category to protect them. Conversely areas which are not likely to contain archaeological remains are given the lowest zoning category (after Pearson 1984).

4.1.02. Although immediate excavation may not be necessary or practical for some sites, it is the responsibility of site managers to protect Zone A areas until excavation may be justified. As custodians of a non-renewable resource managers must insist that excavation be justified and carried out by a professional archaeologist. Furthermore, following excavation, the materials removed or exposed *in situ* must be adequately conserved.

4.2. Zone A: Areas of high archaeological sensitivity.

4.2.01. Areas zoned A in Figure 4 are suspected of containing archaeological remains in the form of buildings, foundations, stores, amenities and services where associated artefacts are likely to be found, thematically and functionally unique structures which are of historical or archaeological research value, and other sites which may be reactivated to reinforce historical integrity of the prison. These sites have a high potential of yielding cultural material which may be used to address significant research questions.

4.2.02. In Zone A areas it is essential that no development activities take place before thorough archaeological investigations have been carried out. If it is found, from test excavations, that a proposed development will threaten a significant archaeological resource, it is strongly recommended that the development be redesigned to avoid that resource.

4.2.03. It is recommended that areas classified as Zone A be thoroughly tested and defined before development works are undertaken. Based on archaeological assessments of the sites, feasible options might be to:

- proceed with development works;
- salvage remains;
- redesign development works to avoid destruction of an unexcavated archaeological resource;
- expose and display remains.

4.4.01. Areas zoned C in Figure 4 would appear to have little or no potential for archaeological remains. This conclusion is based on documentary research. Zone C areas were not places of concentrated activity nor were substantial buildings constructed in these areas. However, 19th Century prison plans indicate that shallow drains dissect various areas within the compound. Contractors should be briefed on the possibility of uncovering such remains. Should archaeological remains be uncovered in the course of development works it is recommended that contractors cease work until the remains have been inspected and assessed by an archaeologist.

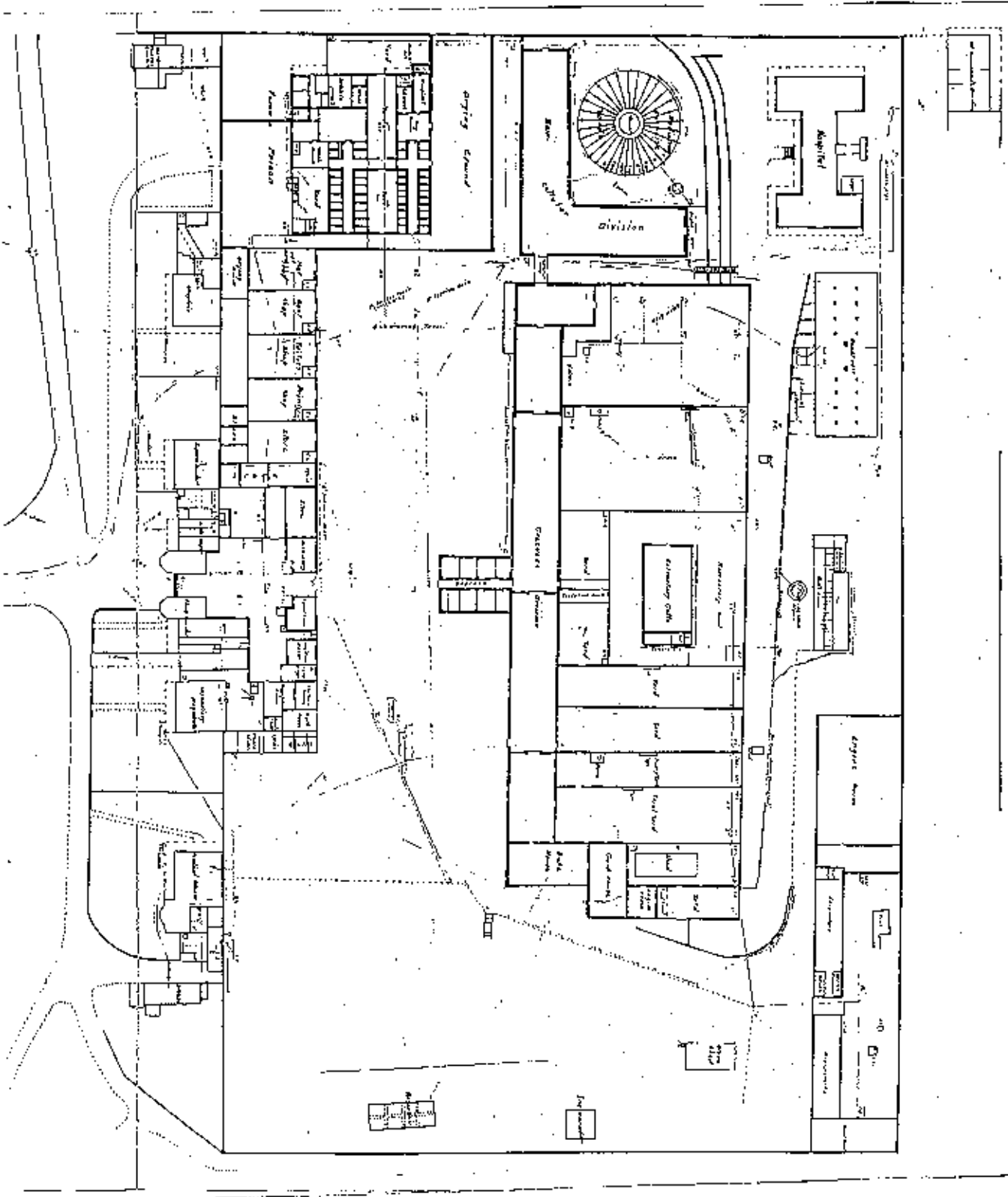
4.4. Zone C: Areas of little or no archaeological sensitivity.

4.3.02. It is recommended that areas classified as Zone B be sufficiently archaeologically tested to locate any major remains which may necessitate redesigning development works. Development works proceeding on the basis of test excavation results should be accompanied by archaeological surveillance. During such works contracts should allow for proper salvage of remains.

4.3.01. Areas zoned B in Figure 4 are suspected of containing archaeological remains of less research potential and significance than those in Zone A sites. Remains may include evidence of minor structures adjoining substantial buildings, artificial landfill, garden plots and less predictable deposits within yards and parade areas. There is still a reasonable chance of locating remains of high research or display value in Zone B areas. Consequently development works which will disturb subsurface deposits should be preceded by archaeological testing.

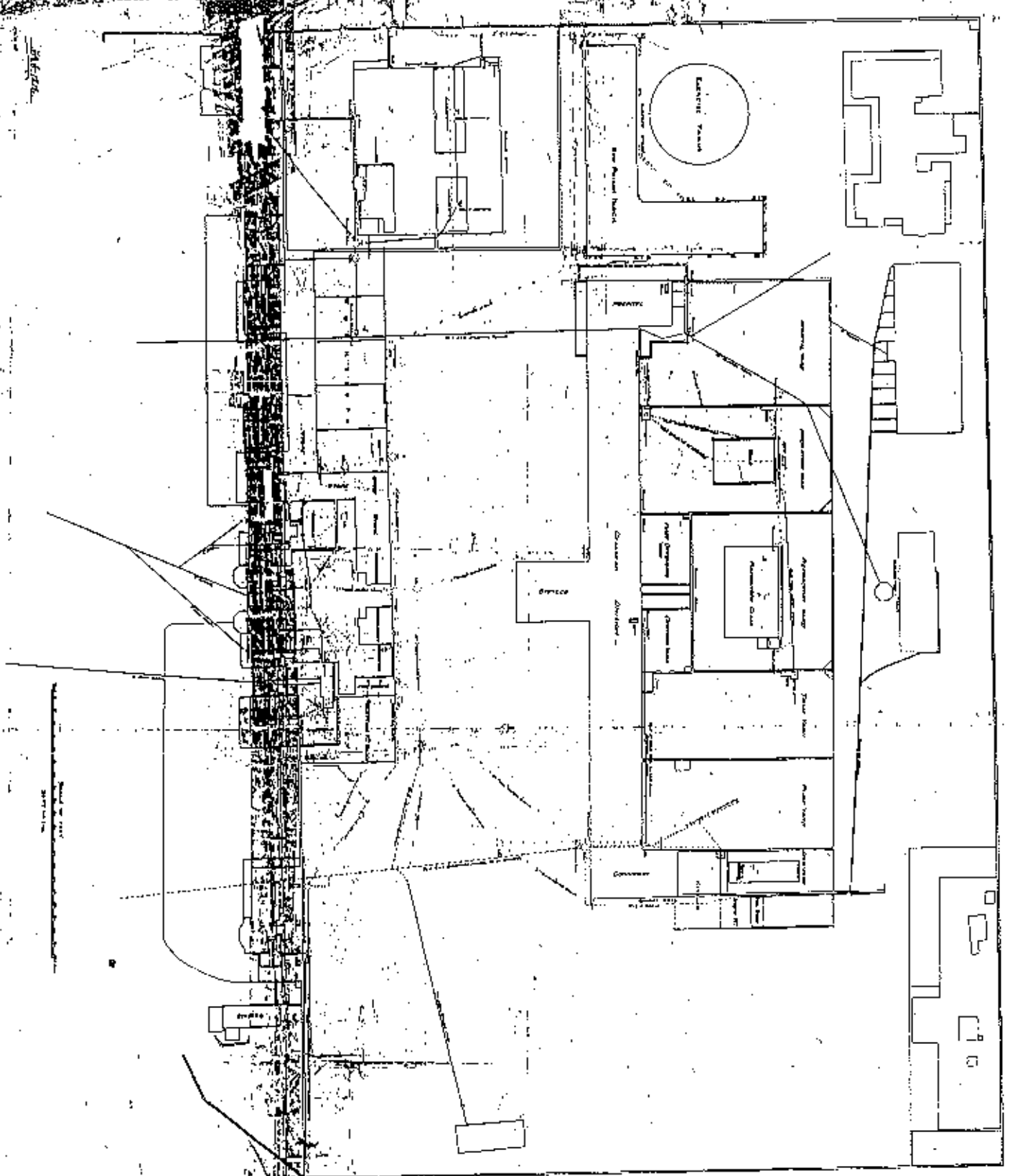
4.3. Zone B: Areas of medium archaeological sensitivity.

PLAN
—OF—
FREEMANTLE PRISON
Scale 30 Feet to an Inch

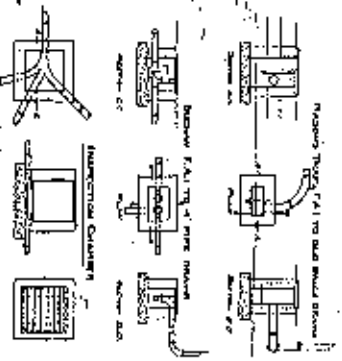
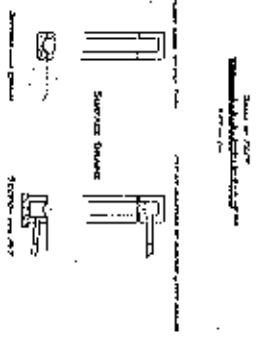


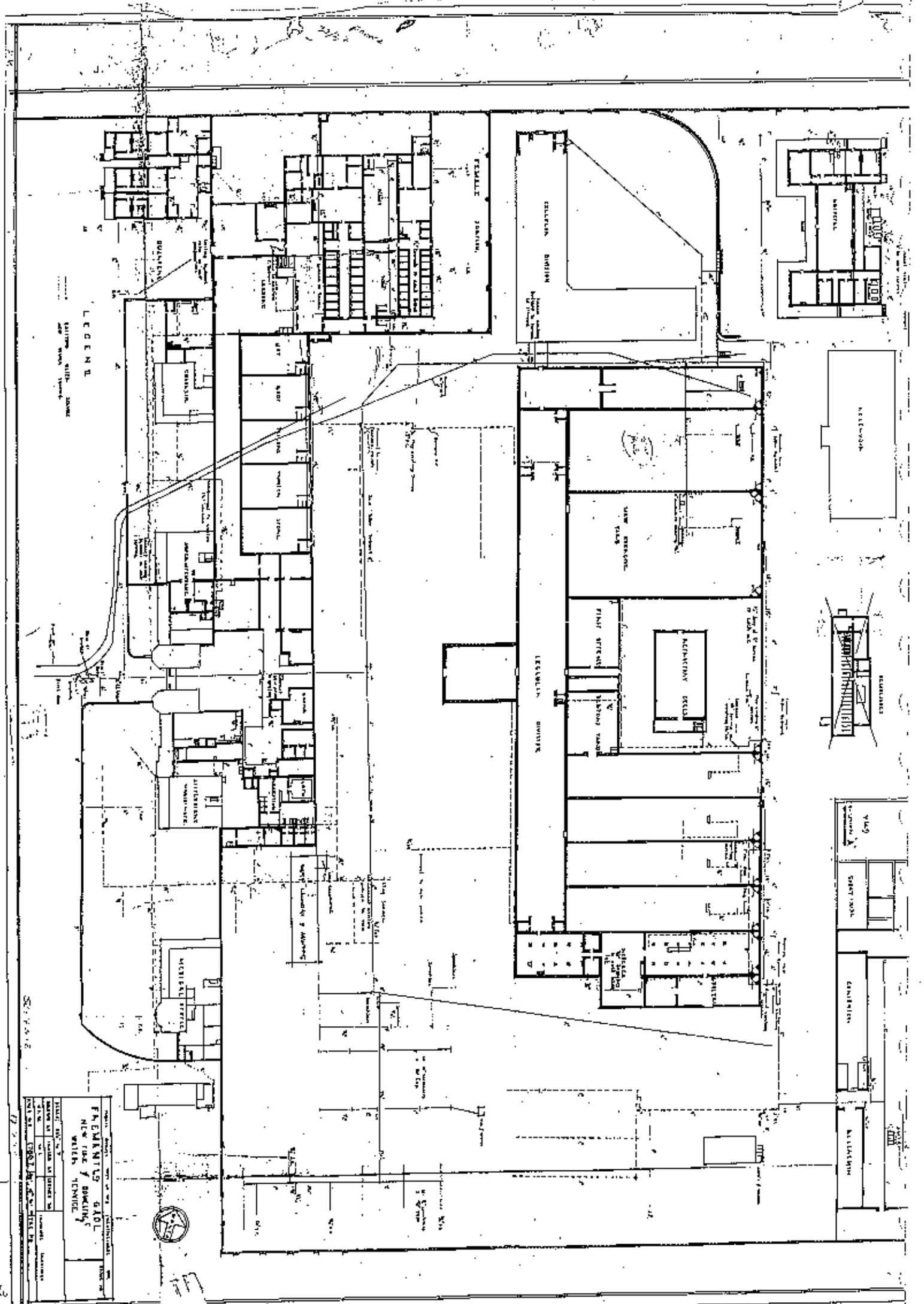
APPENDIX 2: Building Management Authority and Public Works Department Plans

Fremantle Prison Drainage



DETAILS OF TRAPS &

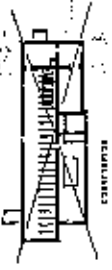




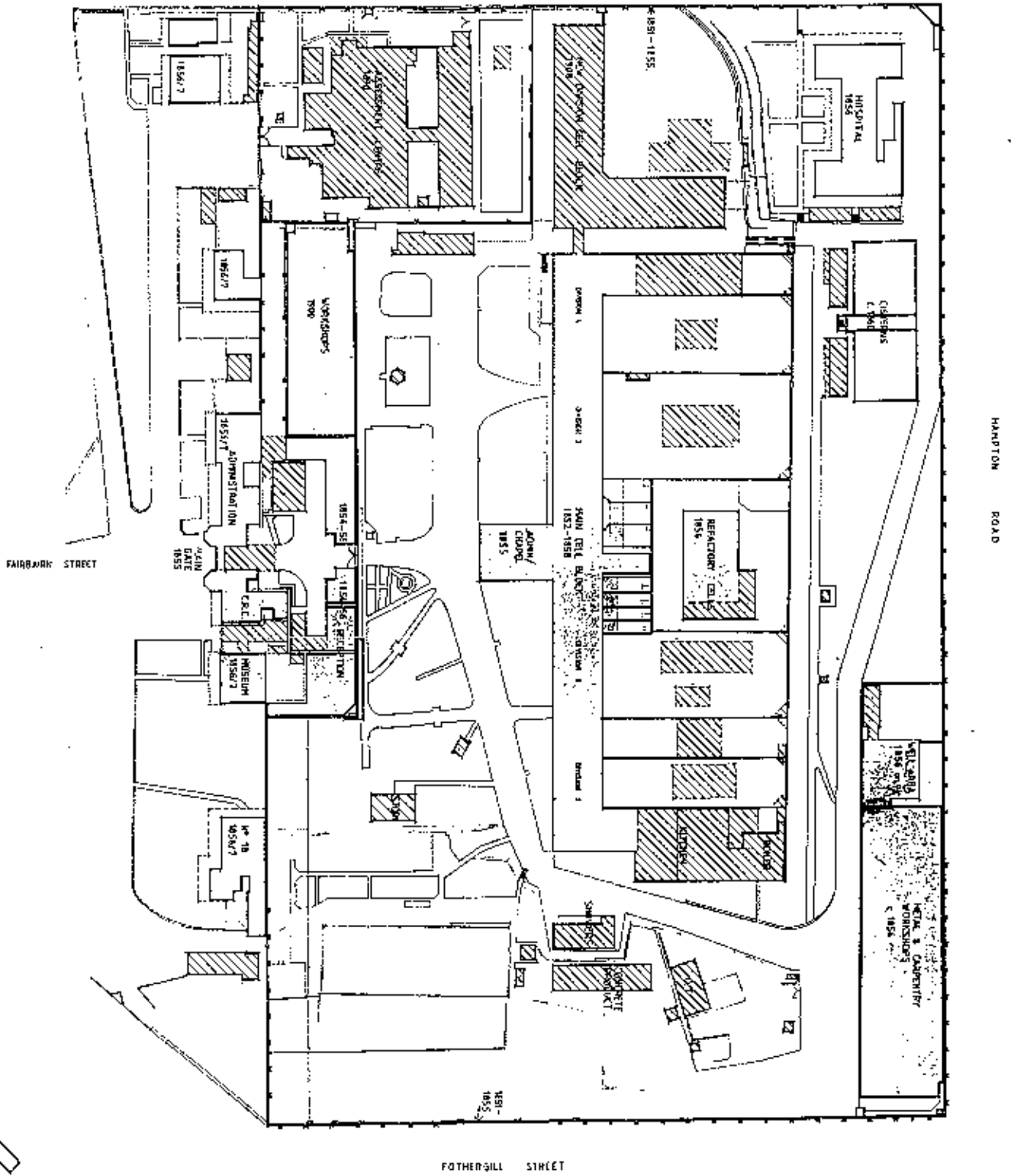
LEGEND

SITTING WITH BAR

FIREMAN'S GOLF CLUB
 NEW LINE Y BOWLING
 WHITE, TENNIS



DATE: 10/1/54
 DRAWN BY: J. H. BROWN
 CHECKED BY: J. H. BROWN



**BUILDING MANAGEMENT
AUTHORITY OF
WESTERN AUSTRALIA**

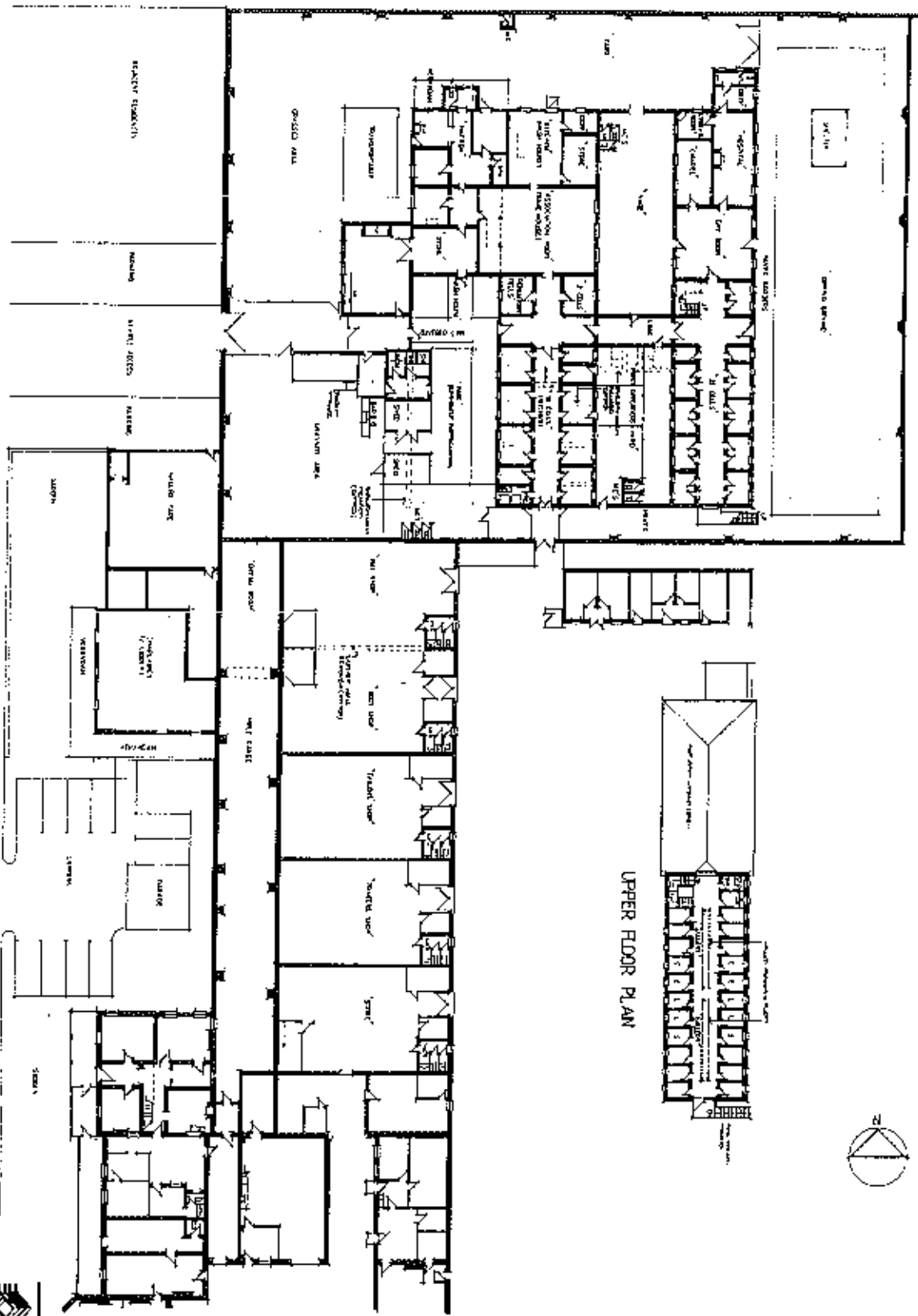
**FREMANTLE PRISON
SITE PLAN**

DATE: 1/5/98
BY: J. B. J. / J. B. J.

SCALE: 1:500

PROJECT: S4-S1

SHADY AREAS INDICATE UNCLASSIFIED BUILDINGS

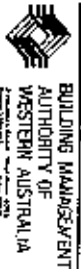


GROUND FLOOR PLAN

EXISTING PLAN

UPPER FLOOR PLAN

**FREMANTLE COLLEGE OF T.A.F.E. PROPOSED ART DEPARTMENT
RELOCATION TO FREMANTLE PRISON - FEASIBILITY**



**BUILDING MANAGEMENT
AUTHORITY OF
WESTERN AUSTRALIA**

ARCHITECTURAL SERVICE
EXISTING PLAN
FREMANTLE PRISON
ASSESSMENT CENTRE & WORKSHOPS

Scale:	1:500	Date:	4/6/81	Project No.:	5K 2
Drawn:	ET/BOV	Checked:	Z/BOV		

NOTE:
1. THIS PLAN IS A PROPOSED RELOCATION OF THE ART DEPARTMENT TO THE FREMANTLE PRISON.
2. THE RELOCATION IS SUBJECT TO THE APPROVAL OF THE WESTERN AUSTRALIAN GOVERNMENT.
3. THE RELOCATION IS SUBJECT TO THE APPROVAL OF THE FREMANTLE PRISON AUTHORITY.

APPENDIX 3: Excavation Details and Stratigraphic Sequences

3.1. CISTERNS

3.1.01. Trench 1:

The south east corner of trench 1 (1m x 2m) was positioned 5.80m from, and perpendicular to, the prison's southern boundary wall. From the prison's western boundary wall it was located 52.66m to the east. This trench was opened to locate the south east corner of the cisterns. According to calculations from the Fremantle Prison Drainage Plan (P.W.D. c.1910) (Appendix 2), the south east corner of the cisterns should have been located 6.30m from the southern wall and 52.16m from the western wall.

The top of a brick wall, running north to south, was uncovered approximately 0.15m below the grass surface in trench 1. It stands 1.11m high and consists of 14 courses of hand-pressed bricks arranged in various sequences (Figure 8). The wall is coated with lime mortar (5mm thick) on its eastern face. Its western face, however, is not rendered and only patches of render remain on the top of the feature. Trench 1 was extended by excavating along the top of the wall in a northerly direction until the north east corner of the building was reached. The building's eastern wall is 7.9m long and is almost entirely intact. No trace of the northern wall was found.

Mortared bricks extend out from the western face of the wall. These bricks form the arc of the cistern's undulating curved roof (Figure 9). Trench 1 was excavated to the depth of the roof surface.

The south east corner of the wall is set against a natural limestone ridge that protrudes from the surface and extends to the prison's southern boundary wall. The corner itself is located 5.40m from the southern boundary wall and 52.06m from the western boundary wall. These findings differ from the Fremantle Prison Drainage Plan (P.W.D. c. 1910) by only 0.4m and 0.1m respectively, suggesting that the plan is extremely accurate.

Deposits in trench 1 are well defined. At the bottom of the trench limestone rubble and boulders lie on top of the cistern's roof. At its deepest point, between the two roof arcs, this layer is 0.94m in depth. A compact layer of red brick with limestone inclusions lies above the major limestone deposit. Above this there is a thin layer of tan coloured clay which effectively seals the lower deposits. No drainage holes were noted in the wall or roof and the red brick appears to have been fired at a low temperature. At some stage organic dark brown soil, containing charcoal and limestone inclusions, was deposited over the clay surface. Yellow sand lies immediately below the existing lawn surface.

3.1.02. Trench 2:

Trench 2 (1m x 2m) was opened to locate the western wall of the Cisterns. In particular, the excavation attempted to find the buildings south west corner. According to the Fremantle Prison Drainage Plan (P.W.D. c.1910)

the south west corner of the Cisterns was located 36.52m from the prison's western boundary wall and 5.04m from the southern boundary wall. What appears to be a strip of mortar is protruding from the ground at the above position. The strip extends north for 4.97m and runs parallel to the Cistern's eastern wall. Trench 2 was opened alongside the mortar strip to confirm that it represents the top of the Cisterns' western wall.

- In trench 2, square 2, the root of the Cisterns was exposed. It lies 0.16m below the surface of the mortar strip. The mortar strip is the surface of the building's western wall. Its location corresponds precisely with the location of the building's western wall indicated on the Fremantle Prison Drainage Plan (P.W.D. c.1910). Consistent with features in trench 1, the Cisterns' root is curved and is made from mortared hand-pressed bricks. These bricks are not rendered on the wall's eastern face.

- A compact layer of limestone rubble and rock was uncovered immediately below the surface of trench 2. The depth of this deposit varies between 1.5cm and 5.8cm. Below the limestone layer, broken bricks and brick rubble extend to a depth of 0.5m in square 1. Limestone rubble and boulders, similar to those exposed in trench 1, lie below the brick. The cisterns' root is located at these levels in square 2. After confirming that both the cisterns' western wall and root are intact at this location in the site, trench 2 was not excavated any further.

3.1.03. Trench 6:

- During the final stage of fieldwork, three additional trenches were excavated at the Cistern site. Trench 6 (1m x 2m) is an extension of trench 1. It was opened in order to determine whether the root of the Cisterns comprises two or more undulations. Consequently, trench 6 was positioned at the centre of the building's eastern wall and extended 1m towards the west.

- Both the Cisterns' root and eastern wall were exposed in trench 6. The form of the exposed root consists of two parts which curve gradually to intersect along a central axis that runs from east to west (Figure 9). The central axis and root curvatures indicate that the entire root covering the Cisterns consists of no more than two components. In cross section the root appears to be an inverted 'W'. The portion exposed in the south side of trench 6 is part of the arc exposed in trench 1. Additionally, the central axis and curvature suggest that an internal structure(s) may have been erected along the axis for structural support, given that the outer edges of both roof portions rest upon the outer walls of the building.

- The sequences of deposits in trench 6 are partially consistent with those in trench 1 (4.2.02). The lowest deposit in trench 6 consists of broken brick and brick rubble containing limestone inclusions. A thin layer of compact limestone and stained sand separates this brick deposit from a later deposit of brick in trench 6. More recent deposits in trench 6 consist of dark brown organic soil and a charcoal rich grey brown deposit. The lowest deposits in trench 1 and trench 6 do not correspond. Rather, the brick deposit in trench 6 appears to be an alternative fill to the limestone boulders and rubble used in trench 1. A brick

deposit in trench 6 corresponding to that in trench 1 is located above the lower brick deposit.

3.1.04. Trench 7:

• Six patches of grass occur at regular intervals in two rows across the Cisterns site. Some months ago a truck was driven over the site. It sunk into one of the patches and became bogged up to its rear axle (pers. comm. F. Jim Mitchell). Suspecting that vents may be located beneath each grass patch, two were selected for investigation.

• Trench 7 (1m²) was opened in the patch previously disturbed by the truck. The trench was located approximately 8.2m west of trench 6. It was hoped that initially the inside of the Cisterns might be viewed through the cavity created by the truck.

• Immediately below the grass surface of trench 7, a substantial amount of yellow sand has been deposited as backfill in the area disturbed and compounded by the truck. As suspected, the roof of the Cisterns has collapsed in this part of the site. Deposits below the yellow sand have been pushed into the cavity created by the truck. Streaks of yellow sand appear in all but one of the lower deposits, suggesting that they are associated with the episode of truck disturbance. Below these layers the original surface deposit has been compacted. This deposit consists of dark brown organic soil similar to that appearing in the surface of other Cistern site trenches (trenches 1, 6 and 8).

• The cavity created by the truck was large enough to look into the Cisterns. The Cisterns are partially filled with brick and rubble and all inside surfaces are rendered. A rendered wall stands about 0.8m south from the trench opening and runs east to west along the axis of the roof inside the Cisterns. It is a tank partition wall which divides the Cisterns into northern and southern sections. The cavity exists in, and around, what was once a square opening in the roof of the Cisterns on a flat surface. The vent itself appears to have been removed.

3.1.05. Trench 8:

• A second patch of grass was selected for excavation in the hope of finding a vent intact within undisturbed deposits beneath. Trench 8 (1m²) was opened in a patch of grass approximately 0.5m north west of trench 6.

• In this trench the Cisterns' roof is intact. A flat square opening exists, over which a vent was once attached. Around the opening, the Cisterns' roof curves gradually. The curve is created by the application of increasing thickness of mortar. Slate has been inserted into the mortar as a damp proof device (see also McIlroy 1989:3.3.7). The eastern wall can be viewed inside the Cisterns through the vent square. The wall is rendered and a pipe is located just north of the tank partition wall. Further north, a double brick doorway leads into the northern tank. The door extends up to the Cistern roof. Using a flashlight, a second doorway could be seen in the Cisterns' western

each other.

- Deposits in trench 8 consist of three layers. Red brick fill, common in other Cistercian site trenches, overlies the building's roof. Above this, grey brown soil with lime, brick and charcoal inclusions has been deposited. This layer is similar to a recent deposit in trench 6 and may be associated with an earlier garden surface. The uppermost layer, rich brown soil, represents part of the present garden or lawn deposit.

3.2. INCINERATOR

3.2.01. Trench 3:

- Trench 3 (1m²) was positioned so as to locate the south east corner of the incinerator. The south east corner of the trench is situated 2.29m from the incinerator. The south east corner of the trench is situated 2.29m from the incinerator. According to the Plan of Fremantle Prison (P.W.D. c. 1908) the incinerator was a substantial structure with dimensions of 6.35m x 6.35m. On this plan the south east corner of the structure is located 2.54m from the prison's southern boundary wall and 12.70m from the corner of the modern retaining wall.

- No trace of the incinerator was found in trench 3. The south face of the trench was set against a prominent caprock ridge beside the southern wall of the prison. Consequently, the incinerator could not have been located further south. It may have been built against the ridge for extra support and easy access. Eight rows of early machine bricks are located 3.8m to the west. The bricks scale the natural limestone embankment.

- Trench 3 was excavated to bedrock. The base of the trench is 0.5m below the present grass surface. The bedrock is covered by 0.2m of compact limestone fill and boulders. Above this layer, 0.1m of compact grey sand with limestone and charcoal inclusions has been deposited. The top layer consists of dark brown organic soil with laterite and limestone inclusions.

3.2.02. Trench 4:

- Trench 4 (1m²) was opened in what was predicted to be the centre of the incinerator. The south east corner of trench 4 is located 5.16m from the prison's southern boundary wall and 9.90m from the corner of the modern retaining wall.

- Trench 4 was excavated to bedrock, 0.6m below the present grass surface, however, no features or structural remains were located. The bedrock surface is covered by a thick layer of white sand and limestone pebbles. A thin lens of charcoal overlies this layer. Above the white sand is a thick deposit of brown sand containing brick and mortar rubble. The layer above this contains limestone nodules and ash fragments. Dark brown soil from an earlier garden surface occurs above the limestone and ash deposit. Another layer of ash dissects the brown soil. Ash also occurs in the upper deposits. Two layers of

light brown sand are separated by a thick ash deposit containing partially burnt organic matter. The upper layer of light brown sand contains a thin lens of ash. Dark brown organic soil extends 15cm below the existing grass surface.

3.3. WOODEN DIVISION

3.3.01. Trench 5:

Trench 5 (1m²) was opened in the north west corner of the existing brick boundary. The trench was extended 0.25m to the north, underneath the modern brickwork and concrete path. Deposits consist of sand and limestone rocks overlying bedrock to a depth of 0.55m below the ground surface. Above the limestone is a 10cm layer of limestone and brown soil. This layer is a mixing zone of the deposits above and below. The dark brown organic soil located above the mixed layer is the existing garden.

No post holes, hand-pressed bricks or any other evidence of Wooden Division was located.

3.4 FEMALE DIVISION YARDS

3.4.01. Trench 1:

Trench 1 (1m²) was excavated in the centre of the northern yard to expose the depth of deposits and discard patterns in the site. The north east corner of trench 1 is located 5.7m from the datum (south west base of the taps). The bitumen surface of trench 1 was removed using a pick. A thin layer of laterite and clay is directly below the bitumen. The remaining deposit consists of limestone fill extending to a depth of 30cm below the laterite. With the exception of two pieces of brick, the limestone fill is sterile. It overlies bedrock and has been sealed with laterite and bitumen to create a hard yard surface.

3.4.02. Trench 2:

Trench 2 (0.5m x 2m) was positioned 2.5m from the south west corner of the northern yard and extended north for 2m along the wall.

It is located in a garden bed bordering the yard. The surface layer, therefore, is extremely disturbed. Below the surface layer only limestone fill, containing some artefacts, and natural pockets of yellow sand cover bedrock.

3.4.03. Trench 3:

Trench 3 (1m x 3m) was excavated in the southern yard of the Females' Prison. According to Fremantle Prison Assessment Centre and Workshops (B.M.A. Plan 1989), some 'earlier walls' were removed from the northern side of the yard. Trench 3 was excavated to locate remains of these walls. It is situated 1.2m east of the datum, the north west corner of the yard, and extends 3m to the east.

- No remains of earlier walls were found in trench 3. The only feature in the trench is a recently installed concrete block supporting a pole from a wire fence.
- Bedrock was located 0.35m below the bitumen surface of the trench. Above bedrock, deposits consist of natural pockets of yellow sand, limestone fill and a thin layer of laterite. These deposits are consistent with those uncovered in the northern yard. They are continuous throughout trench 3, with the exception of the concrete block, and no trace of foundations exists. This suggests that the site has not been disturbed by construction or demolition activities.

3.5. EASTERN LAWN

3.5.01. Trench 1:

- Trench 1 was excavated to locate the north east corner of the Bath House. According to the Fremantle Prison Drainage Plan (P.W.D. 1910), the corner of the building was situated 13.13m from the prison's eastern boundary wall and 24.46m from the south east corner of the Cisterns (c.1894)(Bavin 1990:3.3.08). The north east corner of trench 1 was placed 12.63m from the eastern boundary wall and 23.96m from the south east corner of the Cisterns.
- The northern foundations of the Bath House were uncovered in trench 1. A narrow line of bluestone blocks border its northern edge and red machine bricks are protruding from the eastern section of the trench. As the corner of the Bath House was not uncovered trench 1 was consequently extended to the east, (square 4) and south, (square 3).

- The north east corner of the Bath House is clearly defined in trench 1, square 3. The building's caprock foundations were located 0.25m below the present lawn surface. A post hole (0.07m x 0.15m) was also located in the south east corner of square 3. The wooden post was a vertical support beam of what appears to have been a doorway.
- Red machine bricks are located 1.02m north of the post hole and extend only a short distance into square 4. The post 1870s bricks have been laid in the form of a brick pillar base resting on caprock and bluestone. Although they are not part of the original structure (1856), it is likely that the bricks were added as a support replacing a decaying wooden beam. The distance of 1.02m between the red brick and the post hole is likely to represent an old doorway in the north corner of the building's eastern wall.

- The position of the Bath House wall, measured from north to south, corresponds well to measurements taken from the Fremantle Prison Drainage Plan (P.W.D. 1910). The Bath House wall, however, lies 0.66m closer to the prison's eastern boundary wall than indicated on the plan. As revealed in trench 1, square 3, the north east corner of the Bath House is situated 12.47m

from the prison's eastern boundary wall as opposed to a distance of 13.13m recorded on the drainage plan.

- The surface of the caprock foundations has been smoothed over with crushed limestone. Following the demolition of the building in the mid 20th century, 20cm of limestone fill and grey sand containing pockets of charcoal was deposited over the site. Above this layer grey brown sand was distributed, creating an even surface. These deposits, sealed by the remains of a grass mat, cover the brick, bluestone and caprock foundation. They represent a mid 20th century grass surface established when the building was demolished. A thin layer of crushed limestone covers the early grass surface. This has been topped with grey brown sand containing sparse lime, brick and charcoal inclusions. These landfill sequences are sealed by top soil and the present grass surface covering the site.

3.5.02. Trench 3:

- Trench 3 (1m²) was excavated to locate the north west corner of the bath house. According to the Fremantle Drainage Plan (P.W.D. 1910), the north west corner of the Bath House was located 21.59m from the prison's eastern boundary wall and 22.88m from the south west corner of the Cisterns (c. 1894). The north east corner of trench 3 was opened 21.09m from the eastern boundary wall and 23.51m from the south west corner of the Cisterns. The alignment of the exposed foundation in trench 1 was considered when setting out trench 3. Consequently, the position of the north west corner of the Bath House, as estimated according to the alignment of the exposed foundation, and the position of the Bath House corner, as indicated on the drainage plan, differ by 1.13m.

- The north west corner of the Bath House was uncovered 0.15m below the surface of trench 3. A difference of 0.89m exists between the location of the bath house indicated on the drainage plan and the true location of the Bath House revealed by excavation. The difference indicates that the drainage plan is inaccurate, this time in a north to south direction. As exposed in trench 3 the north west corner of the Bath House lies 21.89m from the prison's eastern boundary wall and 23.77m from the south west corner of the Cisterns. Only the foundations of the wall remain with a narrow line of bluestone along its northern side. Results from trenches 1 and 3 suggest that the north wall foundations of the Bath House and its bluestone border remain intact under the eastern lawn. Furthermore, the foundation of the northern wall varies in width from 0.65m at its eastern corner to 0.34m at its western corner.

- The northern foundation of the Bath House and bluestone border are covered by a series of landfill deposits. The lowest deposit consists of brown sand containing lime and charcoal inclusions. A thin layer of crushed limestone seals this deposit. At some stage in the past, organic brown soil was laid over the limestone deposit. This lawn level was later top dressed with yellow sand, which underlies the present grass surface.

3.5.03: Trench 4:

- Trench 4 was excavated to determine whether remains of a bath exist beneath the southern lawn surface. The north east corner of this trench was positioned 17.71m from the eastern prison wall and 27.639m from the south west corner of the Cisterns in order to intercept one of many baths indicated on the plan of Fremantle Gaol (P.W.D. 1951).

- Red brickwork was uncovered in the eastern half of trench 4. The bricks are arranged in the shape of two squares, where only the western corners have been exposed. The bricks are hand pressed, indicating that the features are pre 1870 and are likely to be part of the original structure. Set on caprock and bordered by a thin limestone foundation, the brickwork appears to comprise the western ends of either two square, or rectangular, brick baths. The baths are positioned side by side, north to south, with a distance of 0.11m separating them. They are rendered on their eastern sides (the inside of the baths) and have been constructed to a height of 3 courses (0.28m).

- Those bath walls which are less than 3 courses high have lime cement on their surface which has been exposed by toppled bricks. Rubble and displaced bricks in the lower deposits also indicate that the baths are not intact. The foundation of a more substantial wall is located 0.3m from the thin bath foundation. It appears to be the base of a partition wall that separated the row of baths from the western half of the room.

- The baths were constructed on caprock in 1856. When the building ceased to operate in the mid 20th century the features were filled with a thick layer of crushed limestone (0.33m). This provided a flat surface on which 0.15m of top soil has been deposited. The present grass surface seals these deposits.

3.5.04: Trench 2:

- Trench 2 (1m x 4m) was positioned to intercept both the western wall of the Bath House and the well. According to the Fremantle Prison Drainage Plan (P.W.D. 1910) the western bath house wall was constructed 21.58m from the eastern prison boundary wall. The eastern edge of the flush well was sunk 23.20m from the boundary wall and 37.41m from the south east corner of the cisterns. The north east corner of trench 2 was positioned 20.48m from the eastern boundary wall and 37.23m from the cisterns.

- Both features were uncovered in trench 2. The western wall of the Bath House was located 21.08m from the eastern boundary wall. The well was uncovered 23.33m from the boundary wall. These positions demonstrate the relative accuracy of the Fremantle Prison Drainage Plan (P.W.D.).

- The western foundation of the Bath House wall lies 0.22m below the existing lawn surface. Caprock has been cut or shaped to form a 0.75m wide foundation. Two limestone blocks are set on the foundation running north to south. These blocks are part of the western Bath House wall and indicate that the building was constructed from limestone. The blocks are separated by a

distance of 0.26m which is too narrow to be an entrance into the building, it is more likely that other blocks have been displaced.

- The surface of the flush well lies 0.44m below the existing grass surface. The wall of the well consists of cut limestone which has been rendered on its inside surface. It is not octagonal as indicated on the Fremantle Prison Drainage Plan (P.W.D. 1910). Rather, the well is circular with a diameter of about 2m.

- Twenty centimeters of top soil overlies all features and deposits in the bath house site. Directly below the top soil, limestone rubble is located at the far eastern end of the trench (square 1). This layer indicates that the Bath House was filled with limestone rubble. As evident in trench 1 and 4, the layer is continuous throughout the site in all areas located within the foundations of the Bath House.

- At the western end of trench 2 (square 4), seven layers flow into the well. Not all of these deposits are continuous throughout the trench. Due to time limitations the well was not excavated to bedrock.

- The lowest deposit uncovered in the well was red brown clay containing charcoal inclusions. This deposit extends 0.85m outside the eastern edge of the well, in square 2, east of the well, the red clay overlies two hearths located in the same stratigraphic level above bedrock. The hearths are rich in artefactual material, particularly burnt bone.

- Above the red clay within the well a layer of grey sand and limestone was deposited. This layer is not present elsewhere in trench 2. The dark yellow sand directly above the grey sand is also not continuous outside the well. These layers seem to represent two episodes of deposition designed to fill the well.

- Organic lime grey soil lies above the grey and yellow sands. This deposit extends east across the trench to the western bath house wall in square 1. A P.V.C. water pipe dissects trench 2 (square 3) within the lime grey soil. The continuous nature of the deposit, however, suggests no major site disturbance at this level. Therefore, it is likely that the deposit was laid at the same time as the modern P.V.C. pipe. Yellow top dressing sand was then laid over the location of the well to level the ground surface. This yellow sand contains a pocket of copper sulphate.

- A pillar of rendered red machine brick was uncovered in square 2, trench 2. The three courses of brick rest against the western face of the bath house wall and are set on bedrock. Like the bricks uncovered in trench 1, the bricks in trench 2 may have been added for structural support during the late 19th or early 20th century.

3.6. FRONT OF SOUTH MAIN CELL BLOCK

3.6.01. Trench 1:

- Trench 1 (1m²) was opened in front of South Main Cell Block to examine stratigraphic sequences in the Parade Ground and the depth of the metalled road in relation to bedrock. The north east corner of the trench was positioned 27.4m from the south west corner of the Chapel and 25.0m from the Administration Block.

- No features were uncovered in trench 1. Bedrock was located 0.62m below the present lawn surface. Rich brown fibrous soil on top of the bedrock represents an early ground surface (0.2m thick). This has been top dressed with about 10cm of yellow sand. The remaining deposit is recent and consists of rich brown fibrous soil. This layer is 0.35m thick and lies directly below the present lawn surface.

APPENDIX 4: Artefacts

4.1. SOUTHERN KNOLL

4.1.01. Trench 1:

- Square 1, Spit 1.
15 nails - Ferrous metal. These items are extremely corroded.
17 pieces of bone - The bone is too fragmented to be identified. Eight pieces are burnt.
- 22 pieces of glass - The glass is fragmented. Most pieces are broken bottle glass. One thick piece of window glass encases a metal filament. Some glass has been exposed to extreme heat. Twenty two pieces are clear glass, one piece is brown bottle glass, and one piece is milky glass.
- Two small pieces of tin.
- One piece of wood (5cm x1cm).
- 11 red brick pebbles - The brick has been fired at a low temperature.
- 22 fragments of slate - Slate was commonly used as roofing material during the 19th century.
- Furnace pebble - Waste material from the metal workshop (pers. comm. Jim F. Mitchell).
- Eight pieces of charcoal - Sample.
- Bitumen surface - Sample. The bitumen is composed of tar, quartz, and laterite.
- Laterite pebbles - Sample.
- Milky quartz - Sample.
- Limestone - Sample.
- Basalt - sample.
- Square 1, Spit 2.
31 small nails - Ferrous metal. Extremely corroded.
One spike nail - Corroded ferrous metal. The nail is 11.8cm long. It has a roughly made flat head.
One boot lace stud - metal.
One butterfly nut - Corroded ferrous metal.
One hexagonal nut - ferrous metal.
- Six pieces of miscellaneous corroded ferrous metal.
- Iron strap - This artefact is part of a thick iron support strap which has fallen off the southern boundary wall. It is 1.5cm thick and is badly corroded.
- 27 pieces of bone - The bone is too fragmented to be identified. Four pieces have been burnt.
- 82 pieces of glass - Most of this material is bottle glass. Fifteen pieces of opalized, thick, brown glass were retrieved. The brown glass appears to be part of the same bottle which has partially melted under intense heat. Only one piece of green bottle glass was found. This glass is slightly opalized as a result of weathering. The remaining glass is clear. Ten pieces appear to be part of the same bottle. They are approximately the same thickness and have been subjected to intense heat. One piece of clear glass is part of the neck of a screw top bottle. Another piece is the base of a small bottle with a diameter of 4.4cm. Lines have been engraved around the lower end of this bottle forming a ridged design. The base of another bottle was also found (diameter

of 5.3cm). This base bears a maker's mark 'IS 946'. Another piece of glass is a fragment of glass tubing (0.8cm in diameter). Six pieces of flat window glass were recovered. Most of this glass is thin. However, one piece of window glass is 0.65cm thick and has a pebbled surface, which would have effectively obscured vision through the window. The remaining clear glass is fragmented bottle glass.

One piece of aluminium foil - recent deposition.

One piece of glazed earthenware - The piece of earthenware is only 1.8cm x 1cm. It has a very slight curve suggesting that it was part of a plate. The glaze is white.

One piece of red earthenware pipe - The pipe is associated with drainage.

Five pieces of slate.

Button - This artefact is a relatively modern plastic button with four thread holes in its centre.

Plastic wire casing - The black plastic was used to protect recent electric wiring.

One piece of wood - The wood is 3.8cm in length and 1cm in width.

10 fragments of charcoal - Sample.

Grey mortar - Sample.

• Square 1, Spit 3.

28 nails - The lengths of the nails are between 1.8cm and 4.7cm. The nail heads are flat and round.

Two aluminium milk bottle tops.

Alfoil - Removed from a cigarette packet.

One piece of wire.

Tin can - The can is extremely corroded and fragmented (14 pieces).

33 pieces of Bone - The bone is fragmented and 12 pieces have been burnt. Only one bone is complete. It is a small chicken bone or a tibia from a small rodent.

136 pieces of glass - Twenty four pieces of brown bottle glass were recovered.

The remaining 112 pieces of glass are clear. Thirty seven pieces of clear bottle glass have been subjected to intense heat. Two thick pieces of clear glass enclose wire and have pebbled surfaces. Similar glass was found in spit 1. The remains of a drinking glass was also found. This glass has a black transfer print on it which depicts a forested garden scene. One piece of clear glass is from a square bottle. Another piece is from a decoratively pitted bottle. A wide bottle neck was recovered which is possibly remains from a milk bottle. Three bottle bases were also uncovered. One base is made of thick glass (diameter of 5cm). It bears the last digit (6) of an incomplete trade number. A smaller bottle base, with a 3cm diameter, bears the first digit (2) of a trade number. The third bottle base has a diameter of 2.5cm and shows no trade

mark.

Button - This is a modern plastic button with four thread holes in its centre.

Clay flower pot - The rim of a baked clay pot was uncovered in spit 3.

Lime mortar on a fragment of red brick - Sample.

Painted mortar - Grey mortar coated with cream paint.

Paint - A cream undercoat covered with green paint.

Six pieces of slate - These pieces of slate average only 3cm x 2cm in size.

Wooden post - Remains of the post are 11.5cm x 7cm x 3cm.

11 pieces of charcoal - Sample.

• Square 2, Spit 1.
 One nail - Corroded fragment of ferrous metal.
 Miscellaneous metal - corroded fragments.
 One screw - - Fragmented galvanized metal.
 19 pieces of bone - Five pieces have been burnt. One bone is part of a joint of a large animal.
 24 pieces of glass - Five fragments of brown bottle glass were recovered from spit 1. These fragments are slightly opalized as a result of weathering. The remaining glass is clear. Five pieces of clear glass have been subjected to intense heat. One piece of glass bears the double ridged design described earlier. Another piece of glass is thin, clear window glass.
 One boot lace stud - metal.
 Floor tile - This artefact is a corner of a broken square mudstone slab. It has thick ridges underneath to allow the tile to grip onto a surface.
 Slate - One piece and five fragments.
 Red brick - The brick has been fired at a low temperature and contains inclusions of limestone.
 Cut limestone - The limestone has been painted with cream calcomite or lime slip.
 Six pieces of charcoal - Sample.
 Limestone - Sample.
 Laterite pebbles - Sample.
 Quartz - Sample.
 • Square 2, Spit 2.
 17 nails - Corroded ferrous metal. The nails range between 1.4cm and 4.4cm in length.
 Miscellaneous metal - Four fragments.
 Aluminium foil.
 Aluminium tube - The tube possibly contained toothpaste.
 Lead weight - The weight is circular with a diameter of 3cm.
 10 pieces of bone - Fragmented.
 One piece of green bottle glass was recovered which has been subjected to extreme heat. Three pieces of brown bottle glass were found which have also been under intense heat. Fifty seven pieces of clear glass were excavated from spit 2. Of these, 20 pieces have melted as a result of intense heat. One piece, in particular, is the neck of a screw top bottle. A piece of a flat mirror and a piece of bottle glass bearing the double ridge design were also retrieved from spit 2. Only four fragments of clear window glass were found.
 Floor tile - This mudstone tile is similar to that discussed above.
 Slate - Three fragments.
 Red brick - The brick has been fired at a low temperature and contains inclusions.
 Furnace rock - Waste from the metal workshop.
 16 pieces of charcoal - Sample.
 Yellow-tan clay - Sample.
 Limestone - Sample.

• Square 2, Spit 3.
 Four small nails (average length is 2.2cm).
 Metal strap - The strap is 2.8cm wide and has been punctured by a nail. The metal is thin and badly corroded.
 Metal strap - This strap is 1.2cm wide.
 A jar lid - Corroded tin. Only the rim of the lid remains.
 Two large nails - Their minimum length is 9cm.
 Miscellaneous metal - Two corroded fragments.
 Nine pieces of bone.
 21 pieces of glass - All the glass removed from spit 3 is clear, though one piece has a green tinge. A large piece of a square bottle was retrieved along with a fragment of window glass (1.5mm thick), a piece of glass bearing the double ridge design, the rim of a jar, part of a thin glass tube, and four pieces of heat affected glass. Fragments of three bottle bases were also found. However, no trade marks were inscribed. One piece is from the base of a small square bottle with a green tinge. Another piece (0.5cm thick) is from the base of a larger round bottle. Two pieces comprise a third bottle base. This bottle had a diameter of approximately 3cm.
 Slate - One small piece of slate was found. Its dimensions are 1.8cm x 3.7cm.
 White glazed earthenware - Three pieces of a plate or bowl (0.9cm thick) were uncovered. The earthenware has been glazed on both sides.
 Red brick - The brick has been fired at a low temperature and contains inclusions.
 Cut limestone - The limestone has been painted with cream calcomite or lime slip.
 Furnace rock - 3 samples. Waste from the metal workshop.
 Four pieces of charcoal - Sample.
 Laterite pebble - Sample.
 • Square 2, Spit 4, 5 and 6.
 Seven nails - The nails are badly corroded and range between 1.7cm and 3.7cm in length.
 Three fragments of clear glass.
 • Square 3, Spit 1, 2 and 3.
 Milk bottle top.
 One fragment of bone
 Nine pieces of glass - One piece is brown bottle glass which has been under extreme heat. Of the 8 pieces of clear glass only 1 has been subjected to intense heat. Five pieces are bottle glass and 3 pieces are thick window glass with wire enclosed and a pebbled surface.
 • Square 4, Spit 1, 2 and 3.
 A metal clamp or tie.
 White glazed earthenware - This artefact is part of the side edge of a large dish. It measures 10.5cm x 4.8cm and is 1.1cm thick. The side of the dish extended 4.8cm from its base at an angle of approximately 120 degrees.
 Toothbrush - The toothbrush is made from green plastic. No maker's mark has been inscribed.

- Cisterns Eastern Wall.
Window glass - A comparatively large piece of window glass (7cm x 9cm) was removed from the surface of the cisterns eastern wall. The glass is 6mm thick and encases a mesh of chicken wire, effectively preventing breakage and access. The glass has a pebbled surface on one face which would have obscured vision through the window. Smaller pieces of this glass have been recovered from squares 1 and 3.

4.1.02. Trench 2:

- Square 1, Spit 1, 2 and 3.
Nut and bolt - The bolt measures 11.9cm in length and has a diameter of 1.2cm. Both items are extremely corroded.
Three pieces of glass - This material includes one fragment of clear glass, a piece of green tinted glass (6.8cm x 6.4cm x 1.5cm) and a fragment of brown bottle glass.
White glazed earthenware - Only one piece of earthenware (3.2cm x 1.8cm) was found in this square.
White porcelain - One fragment, 3mm thick.
Slate - Five pieces of slate were found in square 1. The largest piece measures 8.4cm x 8.1cm. The smallest piece is 2.9cm x 2.6cm.

- Square 2, Spit 1, 2 and 3.
One piece of bone - The bone appears to be part of a rib from sheep or pig. It has been chopped at one end.
Five pieces of glass - A fragment of a brown bottle was found along with the rim (1cm) of a green bottle. Curiously, this type of glass is usually associated with beer and wine bottles. The remaining three pieces of glass are clear. One piece has been subjected to severe heat. Another piece has a pebbled surface and encases wire. The third piece of clear glass is part of the neck of a jar with a 4cm diameter.
White glazed earthenware - The earthenware has been glazed on both sides and measures 3cm x 4cm. However, its thickness varies.
Pipe or pot - This artefact is either the rim of a mudstone pipe or garden pot. The rim is 2.8cm x 0.2cm.
Slate - Three pieces of slate were recovered. Their sizes range from 3.5cm x 3.3cm to 7.8cm x 4.5cm.
Grey mortar on limestone - Sample. The mortar is 1.5cm thick.

4.1.03. Trench 3:

- Square 1, Spit 1.
Mortar - This artefact is a strip of grey mortar which has been coated with cream paint. The strip once covered a thin surface or ledge. It is 5cm wide and 0.9cm thick. Although its length is 5.5cm, both ends of the mortar strip have been snapped.
Mortar - This piece of grey mortar has broken off from a wall. It is part of the top and side edge of the wall.

Galvanized nail - The nail is 6.2cm long, 4mm thick and has a pitched round head.

Square 1, Spit 2.

Aluminum bottle top.
Bone - One fragment of bone was retrieved from spit 2. The bone appears to have come from a sheep and has been snapped at on end.

13 pieces of glass - One piece of opalized green bottle glass was found. The remaining glass is clear. Three pieces are part of the same corrugated bottle. Parts of two different bottle bases were also excavated. One piece has a diameter of 4cm and no maker's mark. The other piece has a diameter of 4.5cm and bears the inscription "P.B.M."; Another two pieces of clear glass are broken bottle rims, one of which has a diameter of 2.8cm.
White glazed earthenware - Three pieces of earthenware were found. They are 0.5cm thick and have been glazed on both sides. The earthenware have a pronounced curves and one piece forms part of a rim. Together the pieces appear to be part of a drinking cup.

One fragment of white porcelain.

One shirt button - Plastic with two thread holes in its centre.

Slate - Two small pieces (3.5cm x 2cm).

Mortar - The strip of grey mortar has been coated with cream paint. It is 5cm wide and 0.9cm thick. Both ends of the mortar strip have been snapped. A similar piece of painted mortar was found in square 1, spit 1.
Two pieces of tarmac - Sample.
Red brick - Sample.

Square 1, Spit 3.

Nails - Three corroded ferrous metal nails. They average 6.5cm in length and have square pitched heads. One galvanized nail with a flat round head. This nail is 3.8cm in length.
Miscellaneous Metal - Four corroded fragments of ferrous metal.

Five pieces of bone - Probably from sheep.

Five pieces of glass - One piece of brown bottle glass. Two pieces of green bottle glass. Two pieces of clear glass.
Leather - Weathered.
Porcelain - One fragment of white porcelain.
Slate - Two fragments.
Furnace Rock - Sample from metal workshop.
Charcoal - Sample.
Quartz - Sample.

Square 1, Spit 4.

Nails - Two ferrous metal nails. One is 3.6cm in length with a flat round head and a squared stem. The other nail is 8.1cm in length with a square pitched head.
Miscellaneous Metal - Three pieces of heavy ferrous metal. The metal is possibly the remains of a lock and an iron strap.
Two pieces of bone - Fragmented remains of a large animal, such as a sheep.
Leather - Weathered.
Wood - A small piece of burnt timber (3.5cm x 3.0cm).
Mortar - Coarse grey mortar with lime inclusions and a thin coat of white paint.
Red Brick - With inclusions. Sample.

Furnace Rock - Sample.

4.1.04. Trench 4:

• Square 1, Spit 1.

Two pieces of glass - One piece of thick clear bottle glass. One piece of a fine clear glass tube.

• Square 1, Spit 2.

Metal - Lid from a twist top jar and two straps. One strap is 0.5cm thick, 1.7cm wide and 25.9cm long. The second strap is broken. It is 2.6cm wide and 0.1cm thick.

Five pieces of glass - Two pieces of opalized window glass (0.2cm thick). Two pieces of clear bottle glass. One piece of green tinted bottle glass. This piece of glass has a machine seam, impurities and part of a trade mark, '...s'; Ceramics - One piece of white glazed 'Wedgewood' ceramics, made in 'England'. The artefact is part of the base of a bowl or a cup.

Plastic - Lid.

Wood - Decomposed Jarrah.

Red Brick - Sample.

Mortar - Coarse grey mortar, 0.4cm thick.

Basalt - Sample.

Quartz - Sample.

• Square 1, Spit 3.

Nail - Three galvanized nails. One has a square head and is 4.5cm long. Another galvanized nail is 6.5cm long and the third nail is 4cm long with a flat round head. Fifteen ferrous metal nails were also removed from spit 3. These nails have flat heads and range in length from 2.5cm to 7.6cm.

Bed Spring - Corroded ferrous metal.

Alfoil

Miscellaneous Metal - Four corroded fragments.

Two pieces of bone - One piece is part of the joint of a large animal, the other is fragmented.

30 pieces of Glass - Six pieces of clear window glass (0.2cm thick). Five pieces of clear glass which have been subjected to intense heat. Thirteen additional fragments of clear glass. Two pieces of brown bottle glass. Four fragments of green tinted glass.

Earthenware - Two fragments of white glazed earthenware. The fragments are 1.0cm and 0.5cm thick.

Porcelain - One piece of pink porcelain, 0.15cm thick. This artefact is part of the rim of a cup.

Slate - Nine fragments.

Wood - Decomposed Jarrah.

Charcoal - Sample.

Mortar - Fine grey mortar coated with lime paint or calcomite.

Red Brick - Sample.

Charcoal - Sample.

Furnace Rock - Sample.

Blumen - Sample.

Limestone - Sample.

Granite - Sample.

• Square 1, Spit 4.

Metal - One nut (2cm²). Two broken nails.

Glass - One fragment of window glass (0.2cm thick).

Slate - Three fragments.

Mortar - Fine grey mortar coated with white paint or calcomite.

Red Brick - Sample.

White Brick - With inclusions. Sample.

Charcoal - Sample.

Furnace Rock - Sample.

• Square 1, Spit 5.

Nail - One broken ferrous metal nail.

Glass - One piece of clear window glass (0.15cm thick).

Slate - Two fragments.

Red Brick - Sample.

Charcoal - Sample.

Limestone - Sample.

Granite - Sample.

4.1.05. Trench 5:

• Square 1, Spit 1.

Five pieces of glass - One piece of clear window glass and four pieces of clear

bottle glass.

Porcelain - One fragment.

Slate - The squared corner piece of a slate tile (4.5cm x 4.3cm).

Mortar Tile - Part of a broken lime mortar tile (1.5cm thick).

• Square 1, Spit 2.

Bone - Two pieces of bone from a large animal.

Glass - One piece of thick green tinted bottle glass.

Slate - One piece (6cm x 3.9cm).

Red Brick - Containing lime inclusions. Sample.

4.1.06. Trench 6:

• Square 1, Spit 1.

Nails - 22 broken ferrous metal nails and one whole nail with a flat round head

(length 3.3cm).

Bottle top - Pink aluminium labelled 'Sunnywest'.

One piece of wire.

Four pieces of miscellaneous metal.

Bone - Six fragments of bone.

Glass - Six pieces of clear glass which have been subjected to intense heat.

One clear bottle base inscribed 'A'. A green tinted bottle neck with an internal

diameter of 0.8cm. An additional 26 fragments of clear bottle glass. Two

pieces of green tinted window glass (2mm thick) and 1 piece of green tinted

window glass (1.5mm thick).

- Slate - Three fragments and one piece of slate measuring 9.3cm x 6.2cm.
- Brick - Hand brick. Sample.
- Wood - Five fragments of decomposed timber.
- Charcoal - 11 fragments. Sample.
- Bitumen - Sample.
- Square 1, Spit 2.
- Nails - Six nails (length 4.8cm) and 16 broken nails (est. length 2.5cm).
- One bolt.
- Tin - Three fragments of tin.
- Miscellaneous metal - Four pieces.
- Bone - Nine fragments.
- Glass - Three fragments of brown bottle glass. One clear glass tube with a diameter of 0.7cm. 12 pieces of clear glass which have been subjected to intense heat. The mouthpieces of two clear glass bottles (diameters 2.6cm and 3.5cm). 32 additional clear bottle glass fragments.
- Porcelain - One fragment of white porcelain.
- Earthenware - One fragment of white double glazed domestic earthenware (0.6cm thick).
- Slate - Three fragments.
- Brick - Four pieces of hand pressed brick. One piece has a stacking mark.
- Wood - Five fragments.
- Furnace rock - Three fragments. Sample
- Charcoal - Nine fragments.
- Square 1, Spit 3-6.
- Nails - Two nails with square pitched heads and squared stems. Their lengths are 7.8cm and 5.2cm.
- Glass - One fragment of clear bottle glass.
- Charcoal - Two fragments. Sample.
- Square 2, Spit 1.
- Nails - 13 broken corroded ferrous metal nails.
- One wire tie.
- Two pieces of lead.
- Alloy - possibly from a cigarette packet.
- One plastic button - Four centered thread holes.
- Bone - 21 fragments of bone.
- One tooth.
- Glass - Two fragments of brown bottle glass. 26 fragments of clear bottle glass of which six pieces have been subjected to intense heat.
- Slate - Four fragments.
- Brick - Hand pressed. Sample.
- Grey mortar - The mortar has a flat surface and is 0.7cm thick. Sample.
- Charcoal - 12 fragments. Sample.
- Square 2, Spit 2.
- Nails - 22 broken nails and five whole nails (est. length 2.1cm).
- Tin - Part of the rim of a corroded tin can.
- Alloy - Burnt.
- One aluminium bottle top.

Half a bakelite light globe cap.

Bone - 18 fragments.

Glass - Five fragments of brown bottle glass. 44 fragments of clear bottle glass of which nine pieces have been subjected to intense heat.

Earthenware - One piece of white and green glazed earthenware which formed part of the rim of a cup (2.5mm thick). The cup was white with a green stripe around its rim. One piece of earthenware (4mm thick) which is part of the base of a plate or saucer.

Slate - Five fragments.

Brick - Two fragments of hand pressed brick. Sample.

Charcoal - 20 fragments. Sample.

• Square 2, Spit 3-6.

Bolt - One curved bolt with a square pitched head.

Glass - One fragment of clear bottle glass.

Ceramic - One fragment of green ceramic (2.5mm thick).

4.1.07. Trench Z.

• Square 1, Spit 1.

Half a bakelite light globe cap.

Glass - Seven pieces of clear bottle glass of which one piece has been subjected to intense heat.

4.1.08. Trench B.

• Square 1, Spit 1.

Nails - Six broken nails (est. length 2.5cm).

One bolt.

Three aluminium bottle tops - One pink bottle top and one burnt bottle top. Both items are labelled 'Sunnywest'. One unlabelled bottle top.

Alfoil - This material is possibly from a cigarette packet.

Miscellaneous metal - One piece of corroded ferrous metal.

Button - One metal button with two centered thread holes and a diameter of 1.4cm.

Cardboard - Five decomposed pieces of the hard cover of a book.

Bone - Six fragments.

Glass - Two fragments of green bottle glass. 41 fragments of clear bottle glass of which six pieces have been heated.

Charcoal - Five pieces. Sample.

• Square 1, Spit 2.

One nail - The nail has a flat round head and is 2.2cm long.

One piece of wire.

Bone - One fragment of burnt bone and one fragment of unburnt bone.

Glass - Four fragments of brown bottle glass. One fragment of green tinted bottle glass. 32 fragments of clear bottle glass of which eight pieces have

been subjected to intense heat. One piece of green tinted window glass (5mm thick). This piece of glass is pitted on one side and encases wire mesh. One

piece of green tinted window glass (3mm thick).

Cardboard - One piece of cardboard from the cover of a book.

One short piece of string.
One plastic lunch wrapper.
Earthenware - Two fragments of a green glazed plate (4mm thick).
Slate - Two fragments.
Brick - Hand pressed. Sample.
Furnace rock - One fragment. Sample.
Charcoal - 10 pieces. Sample.

• Square 1, Split 3.
Nails - Four long nails with flat round heads (length 5.3cm - 9.5cm). 15 whole nails and 42 broken nails (est. length 2.7cm - 4.9cm). 23 small nails and tacs with round heads (length 1.8cm).
Tin - One screw top jar lid with a diameter of 4.4cm. Three fragments of the rim of a corroded tin can.
Boot heel cap - Two halves of a boot heel cap.
Alfoll.
Aluminium bottle top - One pink bottle top labelled 'Sunnywest'. Two silver bottle tops.

Miscellaneous metal - Six fragments of corroded ferrous metal.
Bone - Nine pieces of burnt bone and 47 pieces of unburnt fragmented bone.
Glass - 103 fragments of clear bottle glass of which 36 pieces have been subjected to intense heat. One piece of the clear glass is a square bottle base (5.0cm x 2.6cm). One fragment of green tinted bottle glass. Six fragments of brown bottle glass. One piece of the brown tinted glass is the base of a bottle which is 7mm thick. One piece of green tinted window glass which is pitted and encases wire mesh (0.6cm thick). One piece of green tinted window glass with one corrugated face (0.65cm thick). Two pieces of clear window glass (3mm thick). Six fragments of clear window glass (2mm thick) one of which has been painted pink on one face.

Plastic - Yellow tobacco bag. Recent.
Cardboard - One fragment of a book cover.
Earthenware - Three fragments of a white glazed plate (thickness varies: 0.4cm and 0.25cm). One fragment of a cup with a white glazed rim, a gold band and a blue machine print design.
Floor tile - Terracotta (1.2cm thick).
Wood - Eight fragments.
Slate - One piece (14.8cm x 8.6cm) and two fragments of slate.
Furnace rock - Three fragments. Sample.
Charcoal - 15 fragments and nine pieces. Sample.

4.2. FEMALE DIVISION YARDS

4.2.01. Trench 1:

- Square 1, Spit 1 and 2.

Plastic - Biro casing.
Slate - Two pieces of slate measuring 7.1cm x 4.4cm and 4.3cm x 3.5cm.
Red brick - Fired at a low temperature. Hand pressed. Sample.

4.2.02. Trench 2:

- Square 1, Spit 1.

14 nails - Six small, corroded, ferrous metal nails (average length is 2.8cm).
Eight large ferrous metal roof nails (average length is 6.5cm). Four of the roof nails are intact. The remaining roof nails are broken.
Miscellaneous metal - Galvanized fragment.
Alfoil - One blue milk bottle top labelled 'M' and one pink milk bottle top labelled 'Sunnywest'.

Button - One thin metal shirt button marked 'RING.EDGE.BEST'. The button has four thread holes in its centre.

Bone - One fragment.
21 pieces of glass - One fragment of green bottle glass. Four fragments of clear bottle glass. The mouth of this bottle had a diameter of 3.7cm. One fragment of thin clear glass. Fifteen fragments of clear window glass (1.5mm thick).

One cigarette filter.

Wood - Fragment of dark wood.

Paint - Dried cream paint. Sample.

Mortar - Lime mortar coated with pink calcomite. One piece of coarse grey mortar. Samples.

Slate - Five fragments.

Red brick - Fired at a low temperature. Hand pressed. Sample.

Bitumen - Sample.

Charcoal - Sample.

Limestone - Sample.

Quartz - Sample.

• Square 1, Spit 2.

Nails - Two galvanized roof nails (length 6.5cm). Seven badly corroded broken ferrous nails.
Alfoil - One red bottle top.
Five pieces of glass - Four pieces of window glass (1.5mm thick) and one thin piece of green bottle glass.
Clay pipe - Unmarked stem.
Plastic - Green wire casing with a diameter of 4mm.
Slate - Five fragments and one piece measuring 6cm x 3.5cm.
Red brick - Fired at a low temperature. Hand pressed. Sample.

Bitumen - Sample.

Limestone - Sample.

White chert - Sample.

- Square 1, Spit 1 and 2.
21 nails - Nine corroded ferrous metal nails which range between 3.3cm and 7.8cm in length. Eight fragmented ferrous metal nails. One galvanized nail with a round flat head and a length of 2.8cm. One corroded ferrous metal drawing pin. Two large ferrous metal tacs which are 2.1cm in length. The tacs have round heads with diameters of 2cm.
Metal strap - One broken, corroded ferrous metal. The strap is 4.8cm wide and 1mm thick.
Bone - Six fragments and one piece of bone from a large animal. The larger piece of bone appears to be part of a sheep's vertebrae.
Glass - One piece (3.4cm x 4cm) and six fragments of green tinted window glass. One piece of green tinted bottle glass (0.5cm thick). Two fragments of dark green bottle glass. Two fragments of clear glass (1mm thick).
Earthenware - Brown glazed lime grey mortar. A piece of drainage pipe.
Slate - One piece (3.4cm x 4.5cm) and nine fragments of slate.
Red brick - Sample.
Charcoal - Sample.
- Square 2, Spit 1 and 2.
11 nails - Eight ferrous metal nails which vary in length from 1.9cm to 3.8cm. One tac. The diameter of the tac head is 1cm and its length is 1.8cm. Two galvanized nails which measure 4.5cm and 6cm in length.
Tin strap - The strap measures 11.9cm x 0.9cm and is 0.5mm thick. The lead disc. The disc has a diameter of 4cm and a hole in its centre. The thickness of the disc is 1.5mm.
Button - One metal shirt button. The button has a diameter of 1.6cm and four thread holes in its centre.
21 fragments of bone.
Glass - Twelve fragments of green tinted window glass (2mm thick) and one fragment of green bottle glass.
Slate - One piece (4.6cm x 3.5cm) and seven fragments of slate.
Red brick - Fired at a low temperature. Hand pressed. Sample.
Charcoal - Sample.
- Square 3, Spit 1 and 2.
Metal strap - Two fragments of a corroded ferrous metal strap.
18 nails - Nine ferrous metal nails which range in length from 6.7cm to 2.4cm. Seven long ferrous metal nails. Two galvanized nails measuring 2.4cm and 2.7cm in length.
Seven fragments of bone.
Glass - One fragment of clear window glass and one fragment of green tinted bottle glass.
Clay pipe - Stem inscribed "...GOW". The pipe was manufactured in Glasgow and has a diameter of 0.6cm.
Red brick - Fired at a low temperature. Hand pressed. Sample.
Bitumen - Sample.
Charcoal - Sample.
Laterite - Sample.
Quartz - Sample.

4.3. EASTERN LAWN

4.3.01. Trench 1:

- Square 1, Spit 1.
Seven nails - The nails have pitched heads and range in length from 2.6cm to 5.6cm.
Miscellaneous metal - Scrap copper (0.5mm thick).
Two fragments of bone.
Two fragments of window glass (2mm thick).
Slate - One piece of slate (8.5cm x 4.0cm).
Mortar - Coarse grey mortar coated with lime slip, lime mortar painted with pink calcomite. Samples.
Red brick - Inclusions. Sample.
Charcoal - Sample.
- Square 1, Spit 2.
Five nails - Corroded ferrous metal. The length of these nails varies between 4.9cm and 2.6cm. Two of the nails have flat square heads, one has a flat round head and one nail has a square pitched head.
Glass - One piece of opalized green tinted window glass (2mm thick). One piece of opalized clear bottle glass (0.5mm thick).
Slate - Three fragments.
Mortar - Lime mortar coated with pink calcomite.
- Square 1, Spit 3.
Nails - Corroded ferrous metal. One broken nail and one nail measuring of 4.5cm in length. One tac with a length of 2.3cm and tac head diameter of 1.5cm. Five nail fragments.
Three fragments of corroded tin.
Glass - One fragment of clear glass.
Wood - Decomposed Jarrah.
Slate - One fragment of slate.
Mortar - Lime mortar coated with pink calcomite.
Red brick - Inclusions. Early machine brick. Sample.
Orange-red brick - Fired at a low temperature. Hand pressed. Sample.
Charcoal - Sample.
- Square 2, Spit 1.
Seven nails - Corroded ferrous metal. One roof nail (length 5.6cm). One large nail with a square pitched head and a squared stem (length 7.9cm). Four medium length nails and one small nail with a flat head (length 1.5cm).
Miscellaneous metal - Scrap lead.
Metal strap - Corroded ferrous metal.
Metal washer.
Bone - One fragment from a large animal, probably sheep.
Glass - Four fragments of green tinted window glass (2mm thick).
Slate - Four fragments.
Mortar - Coarse grey mortar coated with lime slip, lime mortar coated with pink calcomite.

- Red brick - Sample.
- Charcoal - Sample.
- Basalt - Sample.
- Square 2, Spit 2.
- 17 nails - Corroded ferrous metal. Seven nails have square pitched heads and lengths of 5.7cm. One tac with a length of 2.4cm and a tac head diameter of 1.9cm. Nine corroded and fragmented nails.
- Eight pieces of glass - Four fragments and part of the base of a green bottle. The base is 0.7cm thick with a steep pontil and part of a maker's mark, "...C...". Three fragments of clear glass.
- Slate - Five fragments.
- Red brick - Fired at a low temperature. Hand pressed. Sample.
- Charcoal - Sample.
- Square 2, Spit 3.
- Nails - Two tacs which measure 2.3cm and 2.7cm in length. The tac heads have diameters of 1.9cm.
- Miscellaneous metal - Three fragments of corroded ferrous metal.
- One fragment of bone.
- Glass - Six pieces of clear bottle glass and one fragment of green tinted window glass (3mm thick).
- Three fragments of slate.
- Charcoal - Sample.
- Granite - Sample.
- Square 3, Spit 1.
- 15 nails - Corroded ferrous metal. Four flat head nails with lengths of 6.8cm. Two thin nails with flat round heads and lengths of 6.0cm. Nine fragmented nails.
- One piece of wire.
- Two buttons - One button has a diameter of 1.4cm and bears the inscription 'Our Own Make'. The second button has a diameter of 1.75cm and has been inscribed 'Excelsior...'. Both buttons are made from metal and have four centered thread holes.
- Bone - Twelve fragments.
- Glass - Nine pieces of clear bottle glass, one of which has been subjected to intense heat. Five fragments of clear window glass. Two of the fragments of window glass are 2mm thick and three fragments are 1.5mm thick.
- Clay pipe - Fragment.
- Wood - Three fragments.
- Slate - One piece (6.3cm x 4.9cm) and 14 fragments of slate.
- Mortar - Grey mortar coated with white calcomite. Lime grey mortar coated with white calcomite.
- Pink calcomite - Sample.
- Red brick - Sample.
- Charcoal - Sample.
- Square 4, Spit 1.
- Three nails - Two broken, corroded ferrous metal nails and one nail of length 3.8cm.

Five fragments of bone.
One fragment of clear glass.
Wood - One decomposed fragment.
Slate - One piece (8.2cm x 3.7cm) and 6 fragments of slate.
Mortar - Coarse grey mortar coated with lime slip.
Red brick - Sample.
Charcoal - Sample.

4.3.02 Trench 2:

• Square 1, Spit 1.
One broken nail.
Miscellaneous metal - Two fragments.
Metal hook - Corroded ferrous metal. The length of the hook is 4.5cm.
Bone - Five fragments and one piece of bone probably from a sheep.
Wood - One fragment.
Earthenware - One piece of red earthenware drainage pipe.
Slate - Two pieces of slate measuring 7 x 3.9cm and 5.3cm x 3.8cm and five fragments.

Mortar - Grey mortar cemented to limestone. The mortar is coated with lime slip, it varies in width between 0.3cm and 1.3cm and has two surfaces angled at 15 degrees. Rough lime grey mortar coated with red render.
Red brick - Machine made. Sample.
Concrete - One piece of concrete (11cm x 8cm). The concrete is 1.8cm thick and has a smooth surface.
Charcoal - Sample.

• Square 1, Spit 2.
One thin nail - The nail has a length of 1.9cm and its head has a diameter of 2mm.
Miscellaneous metal - Three fragments of corroded ferrous metal.
Glass - One piece of green tinted window glass (3.2cm x 0.7cm).
Slate - Two pieces measuring 3.6cm x 1.3cm and 4.3cm x 2.9cm.
15 pieces of mortar - Grey mortar coated with lime/cream calcomite. One piece (7cm x 7cm) has two surfaces at 15 degrees. Four curved pieces of the grey mortar are possibly the remains of a pipe. These pieces measure 10cm x 10cm, 6cm x 9.5cm, 6cm x 3cm and 5.8cm x 4.3cm. Another 10 pieces of the same mortar have flat surfaces. Four of these pieces measure 15cm x 5cm, 12.5cm x 8cm, 8.7cm x 3.5cm and 7.2cm x 5cm. The remaining six flat pieces are approximately 5.0cm x 3.5cm.

• Square 2, Spit 1.
Nails - One galvanized roof nail with a flat head (length 5.3cm). One galvanized nail with a flat round head and a squared stem (length 3.6cm). Three corroded ferrous metal nails with round heads and squared stems (length 6cm).
Two large screws - The screws are galvanized (length 6.3cm).
Small metal hook.
Bolts - Two bolts with squared heads and stems (7.5cm x 0.8cm).
Metal bucket handle.

Miscellaneous metal - One fragment (2.3cm wide and 1cm thick) possibly from a metal strap and an additional three fragments.
Bone - 16 fragments, three of which have been burnt and one has been cut. These remains are from a large animal.
Glass - Eight pieces of window glass (3mm thick) and one piece (2mm thick). The size of these pieces varies between 3.5cm x 3.5cm and 2.5cm x 3.0cm. Two fragments of green bottle glass. Three fragments from a clear bottle (4mm thick). The mouth of the bottle had a diameter of 3.7cm. Two fragments of clear glass (1.5mm thick).
Button - Plastic with four centered thread holes.
Earthenware - Double glazed, brown and tawn pot.
Wood - Two fragments and one piece of decomposed timber (7.0cm x 2.2cm).
Slate - 14 fragments, 14 small pieces (6.5cm x 4.5cm) and four large pieces measuring 21.0cm x 7.0cm, 12.5cm x 7.0cm, 11.5cm x 6.5cm and 9.0cm x 8.5cm.
Mortar - Eight pieces of fine lime mortar coated with lime slip (3cm x 4cm). 11 pieces of fine light grey mortar with smooth surfaces.
Lime coated with pink calcomite.
Red brick - Early machine brick with large inclusions and fired at a low temperature.

• Square 2, Spit 2.

Nails - Six large nails, four of which are broken and two have flat square heads and squared stems (length 10cm). 24 corroded ferrous metal nails which vary in length from 3cm to 4.5cm. 11 fragmented nail stems. Two large pins with squared stems and flat round heads. The nail heads have diameters of 1.7cm and the nail lengths are 2.9cm.
Four buttons - Metal buttons with four centered thread holes. The buttons have diameters of 1.7cm, 1.5cm, 1.4cm and 1.4cm. One button (diameter 1.4cm) is inscribed 'Best Ring Edge'.
Metal hanging hook.
Two metal hooks from a bucket handle.
Miscellaneous metal - Five fragments of scrap lead. Nine fragments of corroded ferrous metal.
Bone - Two fragments of bone, one of which is burnt.
Nine pieces of glass - One fragment of green bottle glass. Two pieces of green tinted window glass (2mm thick). Two fragments of clear window glass (1.5mm thick). One fragment of green tinted bottle glass and three fragments of clear glass.
Clay pipe - Stem and mouthpiece.
Porcelain - Three fragments of white porcelain.
Earthenware - One fragment of yellow glazed earthenware possibly from a mug. One piece of a brown glazed earthenware drainage pipe.
Wood - Fragments of decomposed post timber (vol. 9.0cm x 3.0cm).
Slate - Five fragments and seven pieces of slate measuring 19cm x 9.5cm, 13.5cm x 7.5cm, 13cm x 7cm, 10cm x 9cm, 10.5cm x 6.2cm, 10cm x 5.3cm and 6cm x 9cm.
Mortar - Lime mortar which previously encased a pipe with a diameter of 10cm. Lime mortar with a flat surface. Grey mortar with lime and charcoal inclusions.
Red brick - Inclusions. Sample.

Red-orange brick - Early machine brick with inclusions and a machine seam and indent.
Charcoal - Sample.

• Square 2, Spit 3.

14 nails - Broken corroded ferrous metal nails. They have flat round heads and range between 1.8cm and 5.5cm in length.
Wire mesh.

Glass - One fragment of green bottle glass and one fragment of clear glass.
Button - Plastic button with two centered thread holes.

Wood - Decomposed timber.

Slate - Two pieces of slate (8.5cm x 5.4cm and 18.0cm x 8.5cm).

• Square 3, Spit 1.

Nails - 14 broken ferrous metal nails and one whole nail with a pitched square head and a length of 5.7cm.
Two lead washers - The washers are square and have internal diameters of 0.9cm.
Half a boot heel cap.

Wire - One piece.

Scrap metal - Two pieces of scrap lead.

Miscellaneous metal - 12 pieces of corroded ferrous metal.

Button - One metal button with four centered thread holes and an diameter of 1.7cm. Best Ring Edge;

Bone - 27 fragments of burnt bone and 237 fragments of unburnt bone. These bones are remains from large animals.

Glass - Two fragments of green bottle glass. Nine pieces of clear bottle glass, two of which have been subjected to intense heat and another which is the rim of a bottle with a mouthpiece diameter of 3.7cm. Eight fragments of opalized window glass (1.5mm thick).

Slate - 16 fragments and two pieces measuring 14cm x 6.6cm and 6.8cm x 4.5cm.

Wood - Two pieces of post timber measuring 1cm x 4cm.
Brick - Two fragments of hand pressed brick and one fragment of machine brick. Samples.

Lime grey mortar - Two pieces of mortar with flat surfaces and a thickness of 0.9cm. The mortar pieces measure 7.2cm x 3.8cm and 7.0cm x 5.7cm.
Furnace rock - Two pieces. Sample.

Charcoal - 33 fragments. Sample.

• Square 3, Spit 2.

Nails - One long nail with a square pitched head (length 7.2cm), one nail which is 5.0cm in length, five nails with round heads (length 3.5cm), one galvanized nail with a flat round head and a squared stem, and 13 nail fragments.

Metal strap - Corroded ferrous metal, 2mm thick and 4.5cm wide.
Wire - One piece.

Miscellaneous metal - Six pieces of corroded ferrous metal.

Buttons - Three metal buttons. Two have diameters of 1.7cm. These buttons are inscribed 'Best Ring Edge' The third button has a diameter of 1.3cm. All three buttons have four centered thread holes.

Bone - Two burnt fragments and seven unburnt fragments of bone from large animals.
Glass - One fragment of green bottle glass, three fragments of green tinted bottle glass and seven fragments of clear bottle glass. Three fragments of clear opalized window glass (1.5mm thick).
Slate - Six small pieces of slate measuring 6cm x 8cm and two pieces measuring 6.8cm x 13.0cm and 10.8cm x 17.0cm.
Brick - Three fragments of machine brick. Sample.
Wood - One fragment and two pieces of timber measuring 3.0cm x 4.5cm.
Furnace rock - Seven pieces. Sample.
Charcoal - 27 fragments. Sample.

• Square 3, Spit 3.

Nails - 10 long nails with flat round heads (length 6.7cm). One galvanized nail with a flat round head and a squared stem (3.7cm). 25 nails which range in length 3.1cm to 4.5cm. Seven nails with square flat heads and squared stems (length 2.6cm). 89 tacs with flat round heads (length 1.6cm). 50 of these tacs are corroded together.
Two buckles - One large belt buckle (6.5cm x 4.2cm) and one small boot buckle (3.2cm x 2.3cm).
Boot heel caps - Three whole heel caps and four halves.
Two boot lace studs.
One metal bucket handle.
Metal strap - The strap is punctured by two nail holes and is 2.7cm wide and 2mm thick.

Metal cap from a light globe.

Tin - 26 fragments from a tin can.

Miscellaneous metal - 11 fragments.

Buttons - One metal button with a thread hole stem. One bakelite button with four centered thread holes and a diameter of 1.1cm.

Bone - Two pieces of burnt bone. 34 pieces of unburnt bone of which two pieces have animal hair attached. The bones are the remains of large and small animals.

Glass - Two fragments of green bottle glass, one fragment of brown bottle glass and two fragments of clear bottle glass. One piece of clear window glass which is lined on one face (8.5cm x 6.1cm and 0.6cm thick). Five fragments and two pieces of green tinted window glass. These pieces of glass are 3mm thick and measure 6.4cm x 3.3cm and 5.6cm x 2.5cm. Six fragments of clear window glass.

Porcelain - One piece of white and brown glazed porcelain.

Earthenware - Brown glazed drainage pipe.

Brick - Early machine brick (?). Sample.

Slate - One fragment and five pieces of slate (7.8cm x 4.7cm, 9.0cm x 7.0cm, 8.8cm x 4.8cm, 41.0cm x 22.2cm and 41.2cm x 23.3cm).

Wood - Two fragments of timber.

Furnace rock - Four fragments. Sample.

Charcoal - 16 pieces. Sample.

• Square 4, Spit 1.

Three nails - Corroded ferrous metal. One nail has a length of 2.8cm. The other two nails are broken.

One metal strap - Three fragments of a corroded metal strap (width 1.6cm, thickness 1mm).
 Alloy.
 Button - Metal button with four centered thread holes. The diameter of the button is 1.4cm and it bears the inscription 'Clark and Co...'
 One boot heel cap - The metal shoe is 0.5cm thick and corresponds to a heel width of 7.5cm.
 Bone - 99 fragments of bone from a large animal, five pieces of which have been burnt.
 Glass - One fragment of green tinted window glass (2mm thick). Two fragments of bottle glass (3mm thick) and one fragment of a small square bottle (1mm thick).
 Paper - Label for Bushells Tea.
 Lime mortar - Three pieces of lime mortar with flat surfaces.
 Slate - Seven fragments.
 Furnace Rock - Sample.
 Charcoal - Sample.
 Tar - Sample.

• Square 4, Spit 2.
 Nails - 13 broken nails with flat round heads.
 One boot tac.
 Boot heel caps - Two metal caps to suit heel sizes of 7.3cm and 7.5cm. The metal is 1.2cm wide and 0.5cm thick.
 One bolt which is 9.3cm in length and 1.4cm thick. The bolt has a flat round head with a diameter of 2.7cm.
 Bucket handle - Broken into three pieces.
 Tin can - 12 corroded fragments.
 One piece of wire.
 Button - One metal button with four centered thread holes and a diameter of 1.4cm.
 Miscellaneous metal - Seven fragments.
 Bone - 52 pieces of bone from a large animal of which 10 pieces are burnt.
 Glass - Six pieces of green tinted bottle glass (0.5cm thick). The bottle was machine made as indicated by a machine seam in one piece of glass. One green tinted glass bottle stopper. One piece of dark green bottle glass which has been subjected to intense heat. 10 fragments of green tinted window glass (2mm thick) and three fragments of green tinted window glass (3mm thick).
 One piece of decomposed leather.
 Wood - Three fragments.
 Lime mortar - Five pieces with flat surfaces.
 Furnace rock - Seven fragments. Sample.
 Charcoal - 10 fragments. Sample.

• Square 4, Spit 3.
 Nails - Corroded ferrous metal. Four fragments and two large nails with round heads and lengths of 5cm. The diameters of the nail heads are both 6.7cm. 20 fragmented small nails which have an average length of approximately 2.9cm.

Tacs - Approximately 30 ferrous metal tacs which are corroded together, another five ferrous metal tacs (length 1.4cm) and 14 galvanized tacs with flat round heads (length 1.2cm).
 One screw (length 3.3cm).
 One bolt clip.
 One metal tag.
 Wire - Five pieces.
 Metal straps - Three corroded straps which have broken into 22 pieces. The width of the straps are 1.8cm, 2.8cm and 3.0cm respectively.
 One boot lace stud.
 11 fragments of miscellaneous ferrous metal.
 Bone - 254 pieces of fragmented bone from a large animal. 25 of these pieces have been burnt.
 Glass - One green tinted bottle neck. One green tinted bottle stopper. 18 fragments of green tinted bottle glass, two pieces of which have been subjected to intense heat. One fragment of green bottle glass. One piece of a green tinted glass tube (diameter 1.3cm). Five pieces of clear window glass (1.5mm thick) and seven pieces of green tinted window glass (3mm thick).
 Fabric - Badly decomposed and fragmented cloth.
 Ink well - One broken white glazed earthenware ink well.
 One slate roof pin.
 Slate - One fragment and one piece of slate measuring 9.0cm x 5.1cm.
 Wood - Two fragments and three pieces of dark wood measuring 5.5cm x 1.9cm, 3.0cm x 1.9cm and 4.0cm x 1.5cm.
 Lime mortar - One piece with a flat surface.
 Furnace rock - Sample.
 Charcoal - Sample.

• Square 4, Spit 4.
 Nails - One long ferrous metal nail with a thick round head (length 16cm). 10 large ferrous metal nails with squared stems (length 7.2cm). 50 ferrous metal nails which range in length from 2.8cm to 5.1cm. These nails have round stems and flat round heads. Two galvanized and one ferrous metal root nails. 32 galvanized tacs (length 1.6cm). Five nails with squared stems and flat squared heads (length 2.5cm).
 Four screws - Three large screws with flat round heads (length 4.8cm) and one small screw with a domed round head (length 2.1cm).
 Wire - Six pieces.
 Tin can - Corroded into 36 fragments.
 Bucket handle and hook - Five pieces of corroded ferrous metal.
 Bolt plate from door - Corroded ferrous metal.
 Door latch hook - 23.5cm in length.
 Two metal straps - One strap has a width of 2.4cm. 12 corroded pieces of this strap were excavated. A second strap has a width of 3cm as indicated by only one piece of corroded ferrous metal.
 One metal hair comb.
 One metal belt buckle.
 Eight boot lace studs.
 Boot heel caps - 12 whole metal heel caps, 11 halves and five fragments.
 Lead scrap.

One nut and bolt - The nut is hexagonal and has an internal diameter of 2.5cm.
 Two metal washers - The internal diameters of the washers are 2.3cm and 2.5cm.
 Metal clip.
 Metal pipe - Part of a water pipe with an internal diameter of 2.7cm.
 Buttons - Two metal buttons. One metal button has four centered thread holes and the other has two centered thread holes. One plastic button with four centered thread holes.
 Miscellaneous metal - Nine pieces.
 Bone - 34 pieces of bone, four of which have been burnt.
 Glass - Three fragments of green bottle glass. 22 pieces of clear glass, two pieces of which have been subjected to intense heat. 30 pieces of green tinted window glass, of which 17 pieces are 2mm thick and 13 pieces are 1.5mm thick.
 Two pieces of china - Two fragments of a hand painted cream china cup (2mm thick).
 Porcelain - One piece of white porcelain (3.5mm thick).
 Earthenware - One piece of brown glazed earthenware from the rim of a drainage pipe. One piece of unglazed drainage pipe. One piece of grey domestic earthenware (4mm thick). One piece of white glazed domestic earthenware. One piece of earthenware which has brown glaze on the outside and cream glaze on the inside of what appears to be a pot or jug.
 Wood - Five pieces of dark wood and two pieces of pine.
 Slate - Four fragments and two pieces measuring 7.0cm x 4.3cm and 8.2cm x 3.2cm.
 Red machine brick - Sample.
 Furnace rock - Sample.
 Charcoal - Seven pieces. Sample.

- Square 4, Spit 5.
 Nails - 11 large nails with flat round heads (length 8.1cm). Four fragments and one large nail with a pitched round head and a length of 6.4cm. 39 nails which range in length from 2.6cm to 5.0cm. Three nails with squared stems and squared flat heads (length 2.7cm). 19 galvanized tacs (length 1.4cm - 1.7cm).
 Metal straps - One ferrous metal strap measuring 4.6cm in width, 37.0cm in length and 1.5mm in thickness. One lead strap measuring 22.4cm x 7.0cm. One fragment of corroded ferrous metal of width 2.6cm. One ferrous metal strap measuring 2.6cm in width and 0.8mm in thickness. This strap has broken into three pieces. One roughly beaten iron strap with nail holes (2.5mm thick and 2.5cm wide). One strap measuring 6.5cm in length and 4mm in thickness. This strap has a nut and bolt embedded within it.

One small buckle.
 One bucket - Corroded.
 Metal tag - One metal disc inscribed '60'.
 Boot heel caps - Five whole metal heel caps, eight halves and two fragments.
 Metal bucket - 30 corroded fragments.
 Bucket handle - One quarter of a bucket handle and hook.
 Tin can - Extremely corroded. 35 fragments.
 Five pieces of wire.
 One wire tie.

Five boot lace stud.
 Bolt plate of a door - Three pieces of corroded ferrous metal.
 Lead - Seven pieces of scrap.
 One button - One metal button with a diameter of 1.8cm and four centered thread holes.
 Bone - 120 pieces of bone from a large animal of which 11 pieces are burnt.
 Glass - One piece of opalized green bottle glass, 12 pieces of green tinted bottle glass, one piece of clear machine made bottle glass, five fragments of clear bottle glass and one fragment of brown bottle glass. One hand blown clear bottle neck with a mouthpiece of internal diameter 1.3cm. One piece of clear window glass which is lined or ridged on one side obscuring vision. This glass is 6.5mm thick, 32 fragments of green tinted window glass of which 24 pieces are 2mm thick and eight pieces are 3mm thick. One piece of green tinted window glass measuring 8cm x 6cm (3mm thick) and one piece measuring 5.1cm x 6cm (2mm thick).
 One piece of white porcelain.
 One piece of hand painted china.
 Fabric - Decomposed cotton cloth.
 Wood - Four fragment of dark wood and two pieces measuring 10.0cm x 4.4cm and 7.0cm x 2.2cm.
 Slate - 13 fragments and two pieces measuring 6.6cm x 7.7cm and 12.0cm x 7.5cm.
 Lime mortar - One piece with a flat surface.
 Red brick fragments - Sample.
 Furnace rock - Sample.
 Charcoal - Sample.
 • Square 4, Split 6.
 Nails - 11 thick long nails with round pitched heads (length 7.0cm), 17 thin nails of which three have square pitched heads, four have round pitched heads, six have flat round heads and four are broken (length 7.6cm). 34 nails which have an average length of 4.8cm, 12 of these nails have flat round heads, two have square pitched heads, two have round pitched heads and 18 are broken, 21 tacs (length 1.7cm).
 Bolt - Six bolts with diameters of 1.1cm.
 Nut - One hexagonal nut from a water pipe. The nut has an internal diameter of 1.9cm. One square corroded ferrous metal nut with an internal diameter of 1.1cm.
 Metal straps - One piece of a strap which is 2.7cm wide and 1.5mm thick. The strap has nail holes along its length. One piece of a strap which is 3.9cm wide and 1.5cm thick. Six pieces of a corroded metal strap measuring 3.6cm wide and 1.5mm thick.
 One metal bucket - Extremely corroded. The bucket has fragmented into 63 pieces.
 Eight pieces of wire.
 One fragment of fine wire mesh.
 Boot heel caps - Eight metal heel cap halves.
 Metal buckle - Labelled 'G'.
 Buttons - Two metal buttons with four centered thread holes.
 Scrap metal - 10 fragments of lead and one piece of narrow lead piping (diameter 0.7cm). Five fragments of ferrous metal.

Miscellaneous metal - Eight lumps of corroded heavy metal.
 Bone Five pieces of burnt bone, 41 pieces and 37 fragments of unburnt bone from large animals (bone removed from trench is estimated at 60 per cent).
 Glass - 11 fragments, 13 pieces of green tinted window glass measuring approximately 5.0cm x 4.5cm and three large pieces measuring 5.0cm x 6.5cm, 5.8cm x 7.5cm and 6.7cm x 5.8cm (2mm thick). One fragment and two pieces of green tinted window glass measuring 4.7cm x 3.0cm and 14.7cm x 3.1cm (3mm thick). 13 fragments and one piece of green tinted window glass measuring 7.5cm x 5.5cm (1.5mm thick). Two pieces of green tinted glass which have been subjected to intense heat. One piece of green bottle glass, three pieces of green tinted bottle glass and four pieces of clear glass.
 Earthenware - One piece of tan glazed earthenware from a pot or dish (0.8cm thick). One piece of curved white glazed earthenware from a plate (0.7cm thick). One piece of coarse brown glazed earthenware (2cm thick) from a pipe leading from the bath house into the flush well.
 Fabric - Decomposed cotton cloth.
 Wood - One piece of decomposed red brown timber (8.0cm x 3.5cm).
 Slate - Three pieces of slate measuring 12.0cm x 7.0cm, 4.2cm x 7.5cm and 4.1cm x 10.0cm.
 Furnace rock - Eight large pieces. Sample.
 Charcoal - 21 fragments and 10 pieces. Sample.
 Cut limestone - Sample.

• Square 4, Spit 7.

Nails - Two long nails with round pitched heads (length 7.8cm). Three nails with flat round heads (length 4.2cm). Two broken nails.
 Wire - Two pieces.
 One bucket handle hook.
 Half a boot heel cap.
 Tin - Three fragments.
 Metal pipe - The pipe has an internal diameter of 6cm and is 1.2cm thick.
 Bone - Four pieces.
 Earthenware - Brown glazed drainage pipe.
 Glass - One fragment of green bottle glass. Seven fragments of green tinted window glass (2mm thick).
 Furnace rock - Two fragments. Sample.
 Charcoal - Two fragments. Sample.

4.3.03. Trench 3.

• Square 1, Spit 1.

Nails - Three broken corroded ferrous nails. One tac (length 1.7cm).
 Button - One broken metal button with a diameter of 1.7cm.
 Bone - Three fragments.
 Glass - One fragment of brown bottle glass. One fragment of clear bottle glass.
 Earthenware - Brown glazed drainage pipe.
 Brick - Hand pressed brick. Sample.
 Slate - 31 fragments.
 Charcoal - Seven fragments.

- Square 1, Spit 2.

Nails - Two broken nails with round flat heads.

Tin - The rim of a corroded tin.

Glass - Four fragments of clear bottle glass.

Slate - Three fragments.

Brick - Hand pressed brick from one of the baths. Sample.

Charcoal - One fragment. Sample.

4.3.04. Trench 4:

- Square 1, Spit 1.

Nails - One broken nail (minimum length 5.1cm).

One piece of scrap lead.

Miscellaneous metal - Three fragments of corroded ferrous metal.

Bone - One fragment.

Glass - One fragment of clear bottle glass.

One slate roof pin.

Lime mortar - The mortar has a flat lime rendered surface.

Charcoal - Eight lumps. Sample.

Decomposed grass mat - Remains of an early lawn surface.

- Square 1, Spit 2.

Nails - Three broken nails (est. length 7.7cm).

Charcoal - 21 lumps. Sample.

Decomposed grass mat.

- Square 1, Spit 3.

Nails - One nail with a round head.

Miscellaneous metal - One piece of ferrous metal.

Charcoal - 17 pieces of charcoal. Sample.

4.4. SOUTH MAIN CELL BLOCK

4.4.01. Trench 1.

- Square 1, Splits 1 and 2.
Nails - Two long nails with round heads (length 6.8cm). Two nails (length 3cm). One galvanized nail with a flat round head (length 4cm). 23 tacs with flat round heads (length 1.5cm). 13 broken nails.
Button - One metal button with a diameter of 1.4cm and four centered thread holes.
Miscellaneous metal - Two pieces of corroded ferrous metal.
Bone - Two fragments.
Glass - Two fragments of thick clear bottle glass. The neck of a green tinted machine bottle (internal diameter 2.4cm). Seven fragments of clear window glass (1.5mm thick).
Earthenware - One fragment of double white glazed earthenware (3mm thick).
Slate - 14 fragments.
Brick - Three fragments of hand pressed or early machine brick. Sample.
Lime grey mortar - Sample.
Furnace rock - Six fragments. Sample.
Charcoal - Five fragments. Sample.
- Square 1, Split 3.
Nails - 14 broken nails (est. length 2.6cm). 22 tacs (length 1.4cm).
One fragment of oxidized copper.
Metal hook (length 5.1cm).
One bandaid.
Bone - Two fragments of bone.
Glass - 14 fragments of clear bottle glass. One fragment of green bottle glass.
Nine fragments of clear window glass.
Slate - One fragment.
Brick - One fragment of hand pressed brick. Sample.
Furnace rock - Five fragments. Sample.
Charcoal - 32 fragments. Sample.
Bitumen - Sample.
- Square 1, Split 4.
Nails - 18 nails which range in size from 1.7cm to 4.5cm. Six tacs (length 1.5cm).
Wire - One piece.
One button - This metal button has four centered thread holes and a diameter of 1.4cm.
Bone - 14 fragments of bone.
Glass - Four fragments of clear bottle glass. Five fragments of clear window glass (1.5mm thick).
Slate - Four fragments and one piece of slate measuring 12.0cm x 4.0cm.
Furnace rock - Four pieces. Sample.
Charcoal - Nine fragments. Sample.

- Square 1, Split 5.
Nails - 15 long nails with round heads (length 8.6cm), 22 nails (length 2.7cm - 4.3cm). One galvanized nail with a flat round head (length 3.7cm). Four tacs.
One screw with a round head (length 2.1cm).
One bolt.
One wedge.
Boot heel cap - Two half heel caps.
Wire - Three pieces.
One piece of lead scrap.
Tin - 10 fragments.
Two buttons - Both metal buttons have diameters of 1.4cm and four centered thread holes.
Bone - One fragment.
Glass - Four fragments of clear bottle glass. 10 fragments of clear window glass (1.5mm thick).
Slate - 11 fragments.
Timber - Three fragments of timber.
Lime mortar - Sample.
Furnace rock - Two fragments. Sample.
Charcoal - 15 Fragments. Sample.
- Square 1, Split 6.
Nails - Eight nails (length 6.8cm).
Scrap metal - One piece of corroded ferrous metal.
Miscellaneous metal - Three pieces of corroded ferrous metal.
Bone - One fragment.
Glass - One fragment of green bottle glass and one fragment of brown bottle glass. One fragment of lined clear window glass (4mm thick).
Slate - Six fragments and five pieces of slate (12.2cm x 3.6cm, 9.4cm x 3.8cm, 9.5cm x 4.2cm, 9.5cm x 13.2cm, 13cm x 7cm).
Wood - Two fragments.
Brick - Two fragments of hand pressed brick. Sample.
Furnace rock - Sample.
Charcoal - Nine fragments. Sample.

APPENDIX 5: Levels

SITE	TRENCH	FEATURE	TOP STADIA	CENTRE STADIA	BOTTOM STADIA	BEARING from Dumpy Station
1	1	DATUM (Light Tower)	1.350	1.280	1.212	61
	1	Sq 1	1.600	1.537	1.472	238
	1	Sq 2	1.609	1.535	1.461	248
	1	Sq 2	1.635	1.563	1.493	252
	1	Sq 1	1.633	1.571	1.510	253
	1	East Wall	1.618	1.553	1.488	246
	1	DATUM	1.368	1.291	1.215	71

SITE	TRENCH	FEATURE	TRENCH SURFACE (CENTRE STADIA)	TRENCH BASE (CENTRE STADIA)	BEARING FROM MAG. NORTH
1	1	CISTERNS	1.450	1.891	239
1	1	1. sq 3	SEcm	1.450	237
1	1	1	Centre of wall, west side	1.767	263
1	1	1. sq 4	SWcm	2.173	278
1	1	1. sq 4	NWcm	2.120	282
1	1	1 wall trench	NWcm	2.177	287

SITE	TRENCH	FEATURE	TRENCH SURFACE (CENTRE STADIA)	TRENCH BASE (CENTRE STADIA)	BEARING FROM MAG. NORTH
1	1, wall trench	NEcm	1.887	2.185	288
1	1	Centre of wall east side	1.659	1.786	264
1	1	North end of wall	2.155		
1	1	South end of wall	2.160		
1	1	Cistern base (centre)	2.570		
1	1, sq 1	Base of wall			
1	1, wall trench	pipe, east	2.066		
1	1, sq 4	pipe, west	2.091		
1	2	SEcm	1.594	2.144	256
1	2	SWcm	1.629	2.132	257
1	2	NWcm	1.710	1.838	263
1	2	NEcm	1.708	1.859	261
1	3	SEcm	2.730	3.268	100
1	3	SWcm	2.659	3.231	114
1	3	NWcm	2.655	3.259	98
1	3	NEcm	2.747	3.310	101

1	WOODEN DIVISION	5	Bricks, NE	0.929	200	BEARING
1	TRENCH	FEATURE	CENTRE STADIA			
1						
1			Bricks, NW	0.939	214	
1			Bricks, SW	0.935	207	
1			Soil Surface, SW	1.081		
1			Soil Surface, SE	1.087	199	
1			Soil Surface, NE	1.080		
1			Trench base, NE	1.669		
1			Trench base, NW	1.670		
1			Trench base, SW	1.674		
1			Trench base, SE	1.626		

1	WOODEN DIVISION	5	DATUM (Light Tower)	1.529	1.49	1.451	52
1	TRENCH	FEATURE	TOP STADIA				
1	TRENCH	FEATURE	CENTRE STADIA				
1	TRENCH	FEATURE	BOTTOM STADIA				
1			BEARING				

1	TRENCH	FEATURE	TRENCH SURFACE (CENTRE STADIA)	3.080	3.507	104	BEARING FROM MAG. NORTH
1	INCINERATOR	4	SECM				
1		4	SWcm	2.950	3.469	106	
1		4	NWcm	2.979	3.479	102	
1		4	NEcm	3.152	3.521	101	
1			Wall, east	1.557	2.512		
1			Wall, west	1.489	2.199		
1	TRENCH	FEATURE	TRENCH BASE (CENTRE STADIA)				

1	1	8		Top of roof, east	1.764	
1	1	8		NEcm	1.498	2.330
1	1	8		NWcm	1.486	2.325
1	1	8		SWcm	1.481	1.831
1	1	8		SEcm	1.479	1.840
1	1	7		Top Roof, west	1.774	
1	1	7		Top Roof, centre	1.802	
1	1	7		Top Roof, east	1.792	
1	1	7		NEcm	1.635	2.346
1	1	7		NWcm	1.680	2.352
1	1	7		SWcm	1.563	2.350
1	1	7		SEcm	1.570	2.369
1	1	6		Cistern base, west	2.295	
1	1	6		Cistern base, east	2.293	
1	1	6		NW	1.466	1.722
1	1	6		NW	1.475	1.738
1	1	6		SW	1.408	1.749
1	1	6	1 CISTERNS	SE	1.400	1.698
SITE	TRENCH	FEATURE	CENTRE STADIA	BEARING		

1	1	6	1 CISTERNS			
SITE	TRENCH	FEATURE	TOP	CENTRE	BOTTOM	BEARING
		DATUM (Light Tower)	1.279	1.116	0.951	
			STADIA	STADIA	STADIA	

2	2	3	NE	1.396	1.654	40
2	2	3	SE	1.412	1.640	56
2	2	3	SW	1.400	1.585	339
2	2	3	NWcm	1.382	1.664	346
2	2	2	NEcm		1.690	207
2	2	2	NWcm	1.437		
2	2	2	SWcm	1.437	1.637	203
2	2	2	SEcm	1.440	1.672	202
2	2	1	NEcm	1.511	1.849	195
2	2	1	NWcm	1.487	1.829	212
2	2	1	SWcm	1.494	1.870	204
2	2	1	SEcm	1.503	1.851	192
SITE	TRENCH	FEATURE	TRENCH SURFACE (CENTRE STADIA)	TRENCH BASE (CENTRE STADIA)	BEARING	

2	2	3	DATUM	1.370	1.386	1.400	325
2	2	1 & 2	DATUM	1.417	1.388	1.360	357
SITE	TRENCH	FEATURE	TOP STADIA	CENTRE STADIA	BOTTOM STADIA	BEARING	
			(NW cm of yard)	(SW base of taps)			

3	3	2	Centre of wall	1.345		158
3	3	2	Top of wall	1.232		158
3	3	2	SWcrn	1.424	2.291	174
3	3	2	SEcrn	1.177	1.489	155
3	3	2	NEcrn	1.197	1.493	154
3	3	2	NWcrn	1.416	2.264	175
3	3	1	Bluestone, west	1.240		64
3	3	1	Bluestone, east	1.225		68
3	3	1	Bricks	1.078		69
3	3	1, sq1	SWcrn	0.960	1.134	70
3	3	1, sq4	NWcrn	0.935	1.100	70
3	3	1, sq4	SWcrn	0.958	1.129	74
3	3	1, sq4	SEcrn	0.932	1.141	76
3	3	1, sq3	SWcrn	0.914	1.130	72
3	3	1, sq3	SEcrn	0.918	1.098	63
3	3	1, sq3	NEcrn	0.906	1.100	70
3	BATH HOUSE	1, sq1	NWcrn	0.929	1.320	65
SITE	TRENCH	FEATURE	TRENCH SURFACE (CENTRE STADIA)	TRENCH BASE (CENTRE STADIA)	BEARING	

3	BATH HOUSE	1-4	DATUM (LIGHT TOWER)	1.569	1.527	1.484	281
SITE	TRENCH	FEATURE	TOP STADIA	CENTRE STADIA	BOTTOM STADIA	BEARING	

SITE	TRENCH	FEATURE	TOP STADIA	MIDDLE STADIA	BOTTOM STADIA	BEARING
4	1	DATUM	1.770	1.665	1.560	257

SITE	TRENCH	FEATURE	TRENCH SURFACE (CENTRE STADIA)	TRENCH BASE (CENTRE STADIA)	BEARING
3	2	Foundation, south	1.357		158
3	2	Foundation, north	1.394		156
3	2	PVC Pipe	1.411		168
3	2	Well wall	1.795		171
3	2	Top of drain	1.934		171
3	2	Bottom of drain	2.276		171
3	3	NWcrn	1.163	1.376	36
3	3	NEcrn	1.107	1.400	40
3	3	SEcrn	1.086	1.236	45
3	3	SWcrn	1.123	1.372	38
3	4	NWcrn	1.069	1.267	85
3	4	NEcrn	1.061	1.323	87
3	4	SEcrn	1.082	1.376	91
3	4	SWcrn	1.088	1.293	94

SOUTH MAIN CELL BLOCK

(Secm of Administration Building)

SITE	TRENCH	FEATURE	TRENCH SURFACE (CENTRE STADIA)	TRENCH BASE (CENTRE STADIA)	BEARING
4	1	NWcm	1.374	2.030	74
4	1	NEcm	1.392	1.984	80
4	1	SEcm	1.348	1.972	86
4	1	SWcm	1.335	1.986	93