



**FREMANTLE PRISON PARADE GROUND
ARCHAEOLOGICAL TEST EXCAVATION RESULTS
(STAGE 3)**

for
Palassis Architects and Department of Housing and Works

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INTRODUCTION

Fremantle Prison is located in the City of Fremantle, Western Australia (Figure 1). It was operating as a prison from 1859 through to 1991. Currently the site is managed with the Department of Housing and Works (DHW) and is managed as a nationally significant heritage site with multiple usages such as tourist destination, museum with collections, function venue, accommodation for offices, and accommodation for museum workers. Eureka Archaeological Research and Consulting (Eureka) have been engaged by Palassis Architects, on behalf of DHW, to undertake an archaeological assessment of the Fremantle Prison parade ground, in light of a proposed re-development of the area.

Fremantle Prison is listed on a number of local, state and federal heritage registers; including the Register of Heritage Places, National Heritage Register, Register of the National Estate, City of Fremantle – Municipal Heritage Inventory, National Trust of Western Australia. At the time of writing this report it is also part of a consortium of convict-era heritage sites forming a national bid for World Heritage Listing.

The proposed redevelopment of the parade ground is part of a wider master plan that aims to improve functionality of the space within Fremantle Prison, at the same time as enhancing and conserving the site's historical integrity (Figure 2). As part of this plan it is expected that some form of ground disturbance will take place within the parade ground. This disturbance has the potential to impact upon known and unknown subsurface archaeological features and deposits.

The results of the excavation and report are intended to help guide the next stage of design and project outcomes, so that impacts to this archaeological resource are either mitigated or kept to a minimum. Recommendations and advice are also provided in the event that archaeological material or features are encountered during future ground disturbance works. Meetings to discuss the outcomes have been ongoing throughout the life of the project.

Eureka conducted test excavations within the parade ground on the following dates: 14 - 15th and 22nd August and 2nd - 6th and 13th October 2008. The areas chosen for excavation were based upon the preliminary GIS model identifying potential archaeological features, background research and the location of the proposed development (Eureka 2008 a & b) (Figure 4). These areas are as follows:

- Area 1. Wooden Division
- Area 2. Well
- Area 3. Wooden Division
- Area 5. Metalled Road

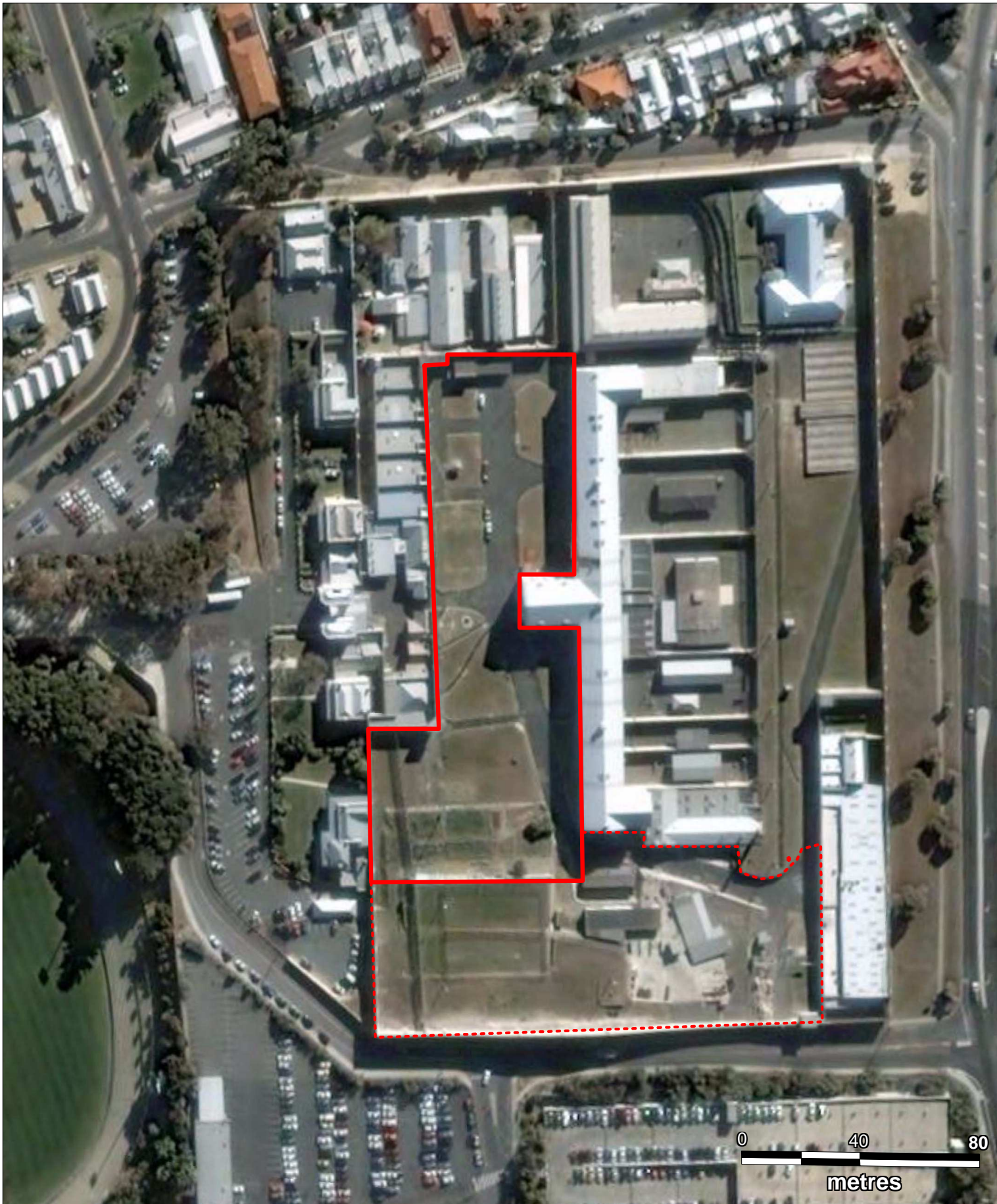
Figure 1: Fremantle Prison Overview



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UTM MGA94 Zone 50K



Figure 2: Fremantle Prison Development Boundary



Legend

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First Development Boundary

Development Boundary



PROJECT SUMMARY

A staged approach has been used to assess the archaeological potential of the prison parade ground. Prior to undertaking the archaeological excavation, a GIS predictive model and historical background of the parade ground was undertaken (Eureka 2008 a & b).

Stage 1.	GIS Predictive Model and Desktop Review
Stage 2.	Historical Background Research
Stage 3.	Excavation

This report discusses the results of the excavation with reference to these earlier stages. The original reports for Stage 1 and Stage 2 should be reviewed for a more detailed account.

STAGE 1.

The aim of the GIS predictive model (Stage 1) was to identify potentially significant archaeological features or deposits that may be disturbed during the development of the parade ground and develop preliminary strategies and procedures to mitigate any destruction of these features prior to any proposed development. This assessment of archaeological potential was based upon a sample of eight available site plans (c. 1858-1990) and the past archaeological assessment conducted at Fremantle Prison, Bavin (1990 a & b).

Only one known prior archaeological excavation has taken place within the parade ground (Bavin 1990 b). As part of this process Bavin produced an archaeological zoning plan (1990a) which divided the prison into areas of predicted archaeological sensitivity (Figure 3):

- Zone A: areas of **high archaeological sensitivity**. Research indicated that these areas may contain archaeological remains in the form of building foundations, stores, amenities, services and associated cultural artefacts. Such areas are likely to have high historical and archaeological value in relation to the history of the prison;
- Zone B: areas of **medium archaeological sensitivity**. Research indicated that these areas may contain archaeological remains of less research potential and significance than those in Zone A i.e. minor structures adjoining substantial buildings, artificial landfill, garden plots and less predictable deposits within yards and parade areas ;and
- Zone C: areas of **little or no archaeological sensitivity**. These areas have little of no potential for archaeological remains. These areas were places of little concentrated activity, and were where no substantial buildings were constructed as based upon historical documentary evidence.

This zoning plan was based upon historical research only and is to be used as a predictive tool for determining the potential location of archaeological features. Excavation and/or development of these areas has the opportunity to further define the archaeological characteristics of the prison.

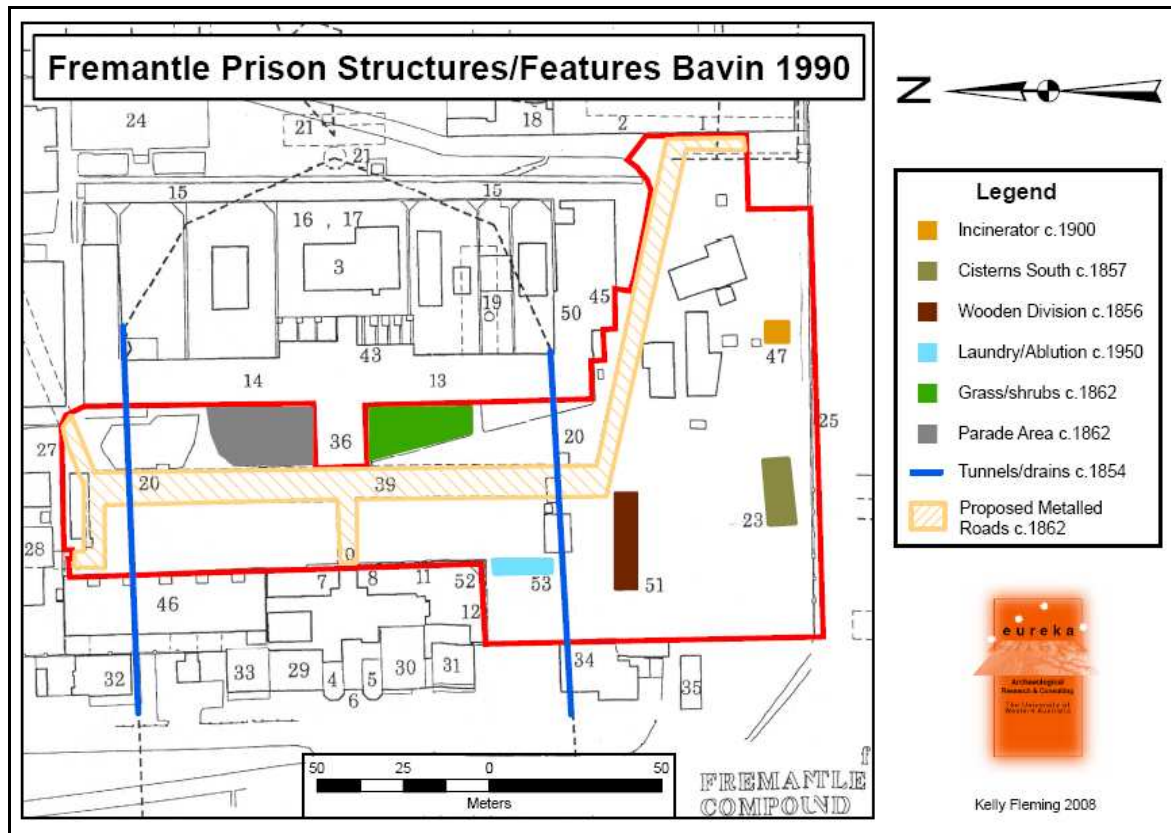


Figure 3. Archaeological features identified within the parade ground development area by Bavin (1990 a & b).

During this research, Bavin identified eight potential archaeological features within the parade ground development area. Four were investigated for archaeological remains (Table 1).

Structure	Date	Zone	Extent of Excavations	Outcome
Tunnels/Drains	1854	B/C	No Excavation	NA
Wooden Division	1856	A	1 trench 1 m ²	Not Located
Cisterns (south)	1857	A	5 trenches either 1 m ² or 1x2 m	Located
Proposed Metalled Road	1862	A	1 trench 1 m ²	Not Located
Parade Area	1862	B	No Excavation	NA
Grass and Shrubs	1862	B	No Excavation	NA
Incinerator	1900	A	2 trenches 1 m ²	Not Located
Laundry and Ablution Block	1950	C	No Excavation	NA

Table 1. Archaeological features and structures identified by Bavin (1990 a & b) within the parade ground.

Whilst undertaking research into identifying potential features within the parade ground for Stage 1 of this project, it became evident that further documentary evidence and archaeological excavation would be required in order to gain a clearer understanding of the nature of the archaeological deposit within the parade ground. Bavin's excavations were minimal (i.e. only two 1 m² test pits were excavated within the present study area) and had limited success in identifying the location of archaeological features. A review of the historical plans also highlighted discrepancies in the location of some features. More recent disturbance and/or destruction of archaeological features may also have occurred as a result of the prison's continued use until 1990 and its more recent development as a tourist destination.

Based upon the available information six potential archaeological features were identified within the parade ground development area as part of the GIS predictive model (Figure 4):

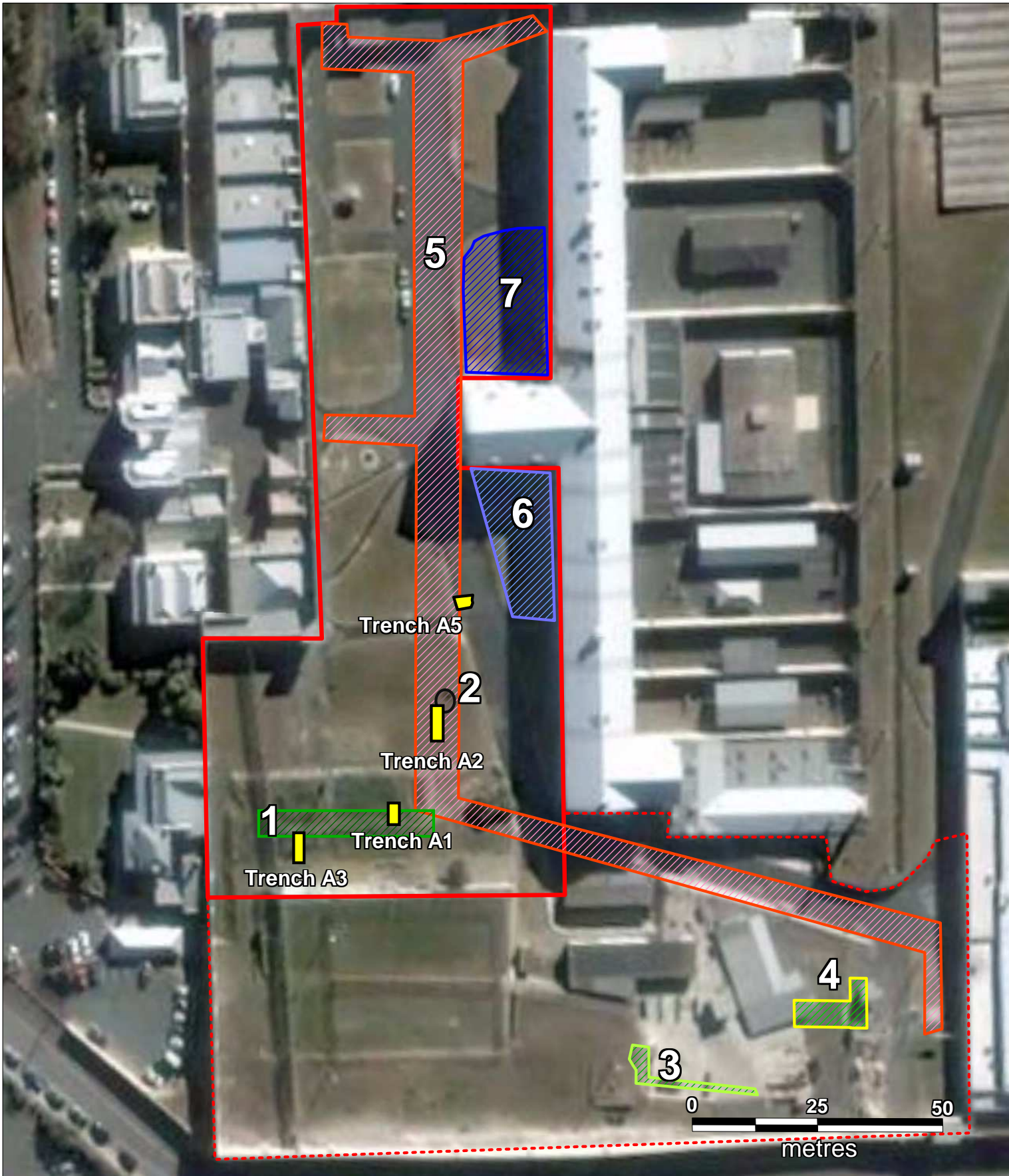
- Well in front of the South Main Cell Block (c.1858)
- Wooden Division (c.1856)
- Stone Shed (c.1890)
- Proposed Metalled Roads (c.1862)
- Parade Area (incl. Officers Shelter Shed c.1908) & Grass and Shrubs (c.1862)
- Incinerator and associated rubbish deposits (c.1900)

STAGE 2.











Stage 2 of the project involved further detailed historical research into the identified archaeological features within the parade ground. This involved reviewing, where possible, all the primary resources identified by Bavin (1990 a & b), as well as additional sources. The aim of undertaking this additional research was to attempt to clarify discrepancies relating to the location of archaeological features, as well as to obtain further information relating to these potential physical remains and their relationship to the history of the use of Fremantle Prison.

A detailed account of the findings provided in the Stage 2 report are repeated in the historical background chapter of this report (Eureka 2008 b).

Figure 4: Trench Location & Predicted Archaeological Features



Legend

<p>Created on the 28.01.2009 by eureka archaeological research and consulting UWA</p> <p>Map data provided by MapData Science & OpenStreetMap UTM MGA94 Zone 50K</p>	<p>Development Boundary</p> <p> Red solid line</p>	<p>Predicted Archaeological Features</p> <p> Wooden Division</p> <p> Well</p> <p> Parade Area</p> <p> Garden</p> <p> Metalled Road</p> <p> Incinerators</p> <p> Shed</p>	<p>N</p> 
	<p>Trench locations</p> <p> Yellow rectangle</p>		

BACKGROUND INFORMATION

HERITAGE STATUS

A number of legislative and non-statutory frameworks exist within Australia to help protect and conserve items of cultural heritage significance. These have applications at a national, state and local level; how and if they apply to specific heritage items will depend on each sites individual significance assessment. Fremantle Prison is considered significant at a local, state and national level. As such it is listed on the following heritage registers:

<i>Heritage Register</i>	<i>ID</i>	<i>Status</i>	<i>Legislation</i>	<i>Application</i>
Register of Heritage Places	01014	Current	<i>Heritage of Western Australia Act 1990</i>	State
National Heritage List	105762	Listed	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	National
Register of the National Estate	10570	Registered	<i>Environment Protection and Biodiversity Conservation Act 1999</i>	National
City of Fremantle – Municipal Heritage Inventory (MHI)	-	Listed	<i>Heritage of Western Australia Act 1990</i>	Local
National Trust of Western Australia	-	Listed	-	Local

Table 2: Heritage listings: Fremantle Prison

SIGNIFICANCE ASSESSMENT

Full significance assessments of the Fremantle Prison complex are provided in each of the respective heritage listings identified above (Table 2). A summary of the key values associated with Fremantle Prison are provided here:

Fremantle Prison, constructed 1852 – 1859, is an important example of nineteenth century convict establishment in Western Australia. It represents a major component of the British convict system in Australia. It is unique in its continued use as a prison until 1991, representing 133 years of continuous use as a prison. The site ...

'...contains major evidence of the physical apparatus of an imperial convict public works establishment and of its adaptation for subsequent colonial use. The establishment is the most intact such complex in Australia. The prison is the outstanding symbol of the period in which WA was developed using convict labour. The austere and monumental quality of the longest and tallest cell range in

Australia is set in a precinct characterised by a homogeneity of form, materials, texture and colour make it a landmark feature of Fremantle' (Place No: 01014, Heritage Council of Western Australia 2008).

Fremantle Prison also has a strong association with the persons who left their mark on its fabric or made an impact on its discipline and reputation such as Jebb (Surveyor General of the [English] Prisons, Henderson (Comptroller General of Convicts), Wray (Acting Comptroller General), Manning (Clerk of Works in the Royal Engineer Office), Fitzgerald and Hampton (Governors), Lefroy, Stone, George and Hann (Superintendants) as well as sappers, miners, artisans, pensioners and the prisoners. Fremantle Prison has considerable research and education potential, its' integrity, authenticity and rich material culture (including historical and archaeological) offers insight into the convict experience throughout the imperial, colonial and state periods. Fremantle Prison contributes to Fremantle's current sense of place in its physical, social and cultural dimensions.

PLANNING DOCUMENTATION

The following are a list of existing planning documents associated with the conservation and protection of Fremantle Prison. The management outcomes identified in each of these documents have implications on any proposed development planned within the Fremantle Prison site:

- Kerr, J. S. 1992, *Fremantle Prison. A Policy for its Conservation*
- Building Management Authority. 1992, *Fremantle Prison Conservation and Future Use.*
- Bavin, L. 1990, *Fremantle Prison Conservation and Future Use: Archaeological Zoning Plan of the Prison Compound.*

HISTORICAL BACKGROUND

FREMANTLE PRISON

The Fremantle Prison site functioned as the central convict establishment in Western Australia. Upon its construction (1852 – 1859) it was utilised as a public works prison, convict distribution depot, convict workshop and the main site of Imperial convict administration in Western Australia. The site was designed by Captain Henderson, Comptroller General of the Swan River Colony and was located on a raised coastal limestone scarp clearly visible from the sea. The imposing building dominated the town of Fremantle in the early nineteenth century. The prison complex is bound by the present street system of Hampton Road, Fothergill Street, Knutsford Street and The Terrace. The complex occupies some 12 acres (4.86 ha) of land and Bavin identified 23 substantial extant structures within the prison walls at the time of its closure as a prison in the 1990's (1990 b).

Following changes to the penal code in Britain, transportation ceased and convicts were no longer sent to the colonies to serve out their sentences. Western Australia was the last colony to receive convicts; the last convict transport ship sailed to Western Australia in October 1867. At this time Fremantle Prison passed into the control of the colonial government, where it became the Colony's and later State's primary place of incarceration (Place ID 105762 National Heritage List). The site remained in use as a prison until 1991. Most recently the site has been reused as a popular tourist attraction.

A full historical account of Fremantle Prison is provided in a number of other sources. For the purposes of this report only potential archaeological features identified within the Fremantle Prison parade ground development area are discussed in detail below (Bavin 1990 a & b, Kerr 1992, BMA 1992). A summary of key historical dates for Fremantle Prison are as follows (Table 3):

<i>Event</i>	<i>Date</i>
Construction began on an Imperial Convict Establishment	1852
First convict occupation of the prison	1855
Cessation of convict transportation to Western Australia	1867
Imperial Convict Establishment is renamed Fremantle Prison	1867
Transfer of prison management to colonial government	1886
First female prisoners	1886
Use as a military gaol and internment centre during both World Wars	World War I and World War II
Female prisoners moved out of Fremantle Prison	1970
Fremantle Prison closed as a prison	30 November 1991

<i>Event</i>	<i>Date</i>
Establishment of Fremantle Prison Trust	1992
Fremantle Prison becomes a tourist attraction	1992

Table 3. Key historical dates for Fremantle Prison.

PARADE GROUND

Wooden Division

The first evidence from the primary documents, referring to the wooden division erected at the Fremantle Prison, is a detailed description of a wooden building erected at the temporary depot in South Fremantle. The report states that due to

'the arrival of the two ships, "Robert Small" and "Phoebe Dunbar," with nearly 600 men, it became necessary to increase the accommodation. A wooden building, 110 feet long, 20 feet wide, on plates, weather-boarded on sides, shingled on battens, and floored, with ship's fittings, was erected in September [1853] in the yard of the present temporary depot. It affords accommodation for 176 men, in two tiers of hammocks. Being built on plates, it can be removed on the expiration of the lease of the present depot' (Royal Engineers' Office Fremantle - Lieut. R.E [Wray] 1855: 196). A report for the period ending June 1855 suggests the structure described above was moved to the Fremantle Prison site; 'the wooden building put up in 1853, for the "Robert Small" and "Phoebe Dunbar" prisoners, has been cut into short lengths, and carried to the new site. It affords, as before, accommodation for 176 men'. (Royal Engineers' Office Fremantle - Capt. R.E [Wray] 1856: 208).

Plans appended to the same volume confirm the location and capacity of the wooden division (Royal Engineers' Office Fremantle - Capt. R.E [Wray] 1856).

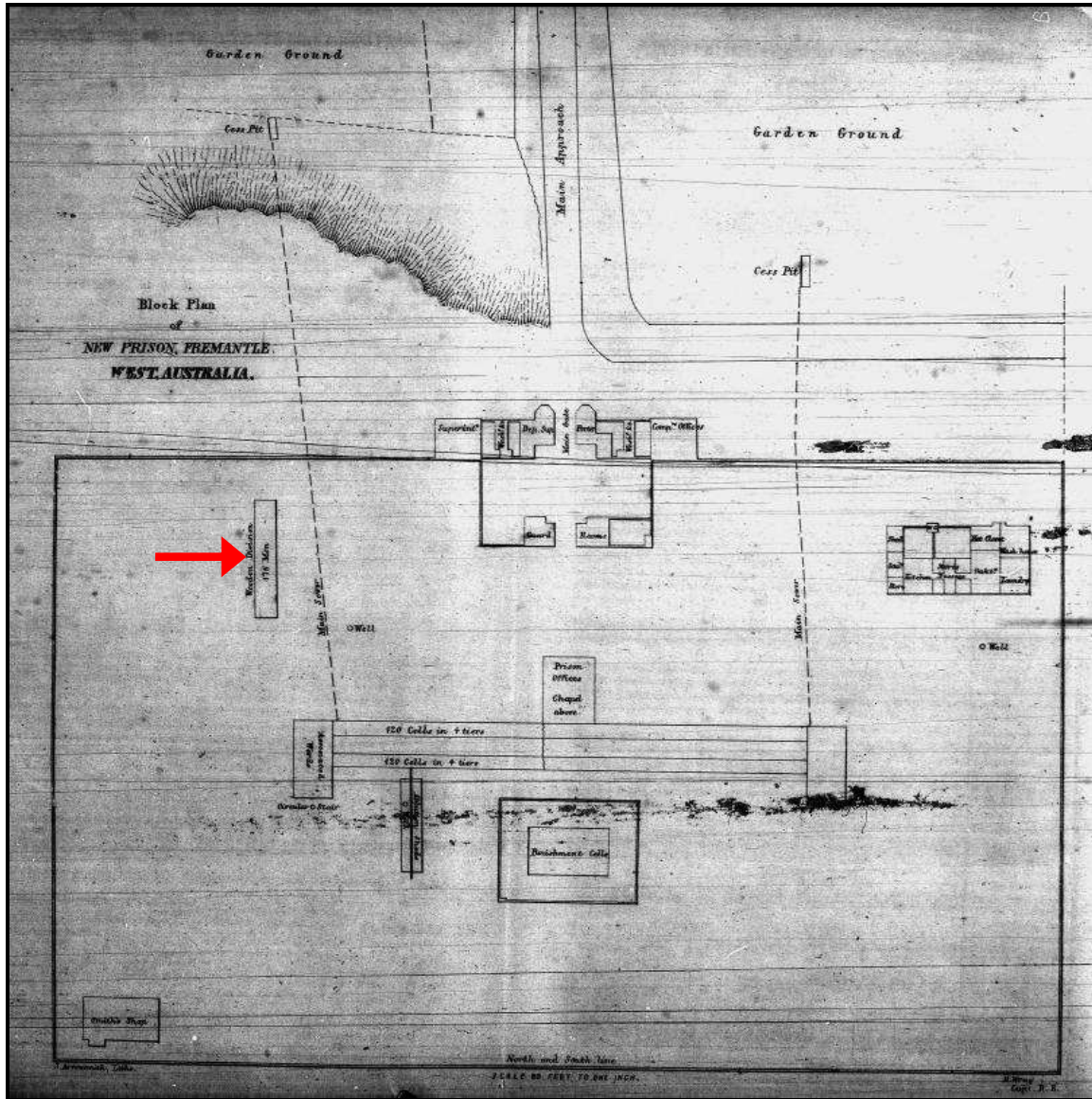


Figure 5. Plan showing structures Fremantle Prison in 1856 (Royal Engineers' Office Fremantle - Capt. R.E [Wray] 1856). Arrow indicates location of wooden division.

The description above indicates the wooden division was 'on plates' so it could be easily removed (Royal Engineers' Office Fremantle - Lieut. R.E [Wray] 1855: 196) confirming that it was a very temporary structure. This would suggest there will be limited physical evidence of such a structure remaining. However there is the potential for archaeological material relating to the period it was occupied to remain *in situ*.

It is unknown exactly when the wooden division was dismantled and removed. However, in in September 1856 a 'large tent [was] erected in the prison yard for the accommodation of prisoners ex "Runnymede," capable of holding 160 men, on a boarded floor' (Royal Engineers' Office Fremantle - Clerk of Works [Manning] 1857: 63; Superintendent's Office Fremantle - Superintendent Fremantle Prison [Dixon] 1859: 31). The tent was removed by February 1857 and it is stated that 'no necessity will again arise for.....temporary accommodation in the manner referred to' due to the 'completion of two new wards' (Superintendent's Office Fremantle -

Superintendent Fremantle Prison [Dixon] 1859: 31). There is no mention of the wooden division but this would suggest it was no longer in use at this time.

No specific information was located that described the levelling and/or building up of the garden bed area where the wooden division was situated but it is assumed the area would have been level enough for the wooden division to have been erected in 1855. By at least 1896 it is shown as 'terraced' (Public Works Department 1896) and this may have been completed in 1862 when the parade ground was being 'reformed' (Superintendent Fremantle Prison [Lefroy] 1862a: 305). It is probable the area leading to the southern prison wall is close to bedrock as can be seen at the base of the wall itself. However, it may have been necessary to raise it above this somewhat to make it suitable for planting. A photograph reproduced in Bosworth (2004: 71) shows planting on the rise at the southern end by c.1909 but it can not be ruled out that this terracing was a product of quarrying stone during the construction of the prison and the wooden division was erected on top of this in 1855 (Plate 1).

Two known intrusions in the area of the wooden division are visible on plans. These are a '4" iron scour pipe' leading from the reservoir on the southern knoll, probably constructed by at least 1879 for the supply of shipping at the Port (Penal Commission 1899: Plan 1; Superintendent Fremantle Prison [Unknown] 1879: 583). Reticulation is also shown at this location in a plan dated 1922/1935 (or perhaps as late as 1942) (Public Works Department 1922 [1935]). If the current terracing was close to its present location in 1855 other intrusions may include the turning over of earth for the purpose of gardening and levelling the area during the last 150 years.

Well c. 1852

A report by Wray detailing works carried out during the half year ending 30th June 1852 describes a well (Figure 4 – Well 1) approx 40 feet deep having been..

'...sunk through the rock at the permanent depot site, requiring little or no steening, and affording a plentiful supply of water for the works and for drinking, and will, I have little doubt, be nearly sufficient for the supply of the intended establishment' (Le Page 1986: 70; Royal Engineers' Office Fremantle - Lieutenant R.E [Wray] 1853: 213).

Although there is no mention of where the well is located, a plan of the Prison, dated 1855, shows three wells within the boundary walls (Figure 4). One of these (Figure 4 – Well 2) is described as being sunk in the six months ending 30th June 1855, *'two washing sheds have been erected in rear of the prison, and a well, 45 feet deep, sunk through the rock convenient to them'*(Royal Engineers' Office Fremantle - Capt. R.E [Wray] 1856: 207). This would confirm this well is not the one referred to in 1852.

Further wells are described in the half yearly report of works in the Fremantle District, for the six months ending 31st Dec 1856 – ‘two wells have been sunk, one for the use of the north wing of the prison (Figure 4 – Well 3), to about 50 feet deep, the other for making mortar.....outside the boundary wall....[t]hese wells are cut in the solid rock....[t]wo other wells are also in the course of sinking for the workshops and baths, each in the vicinity of the building they are intended to supply’ (Royal Engineers' Office Fremantle - Clerk of Works [Manning] 1857: 63). Two of these, the bath house well (Figure 4 – Well 5) and workshops well (Figure 4 – Well 4), are again mentioned in the report for the half year ending June 30 1857 (Royal Engineers' Office Fremantle - Clerk of Works [Manning] 1859a: 51) and again in December 1857 (Royal Engineers' Office Fremantle - Clerk of Works [Manning] 1859b: 110). Although these wells are not indicated on plans at this time the locations of those directly associated with ‘the building[s] they are intended to supply’ (Royal Engineers' Office Fremantle - Clerk of Works [Manning] 1857: 63) can be assumed. The well sunk ‘for the use of the north wing of the prison’ (Royal Engineers' Office Fremantle - Clerk of Works [Manning] 1857: 63) is assumed to be the only northern well shown on the 1856 plan (Figure 4 – Well 3).

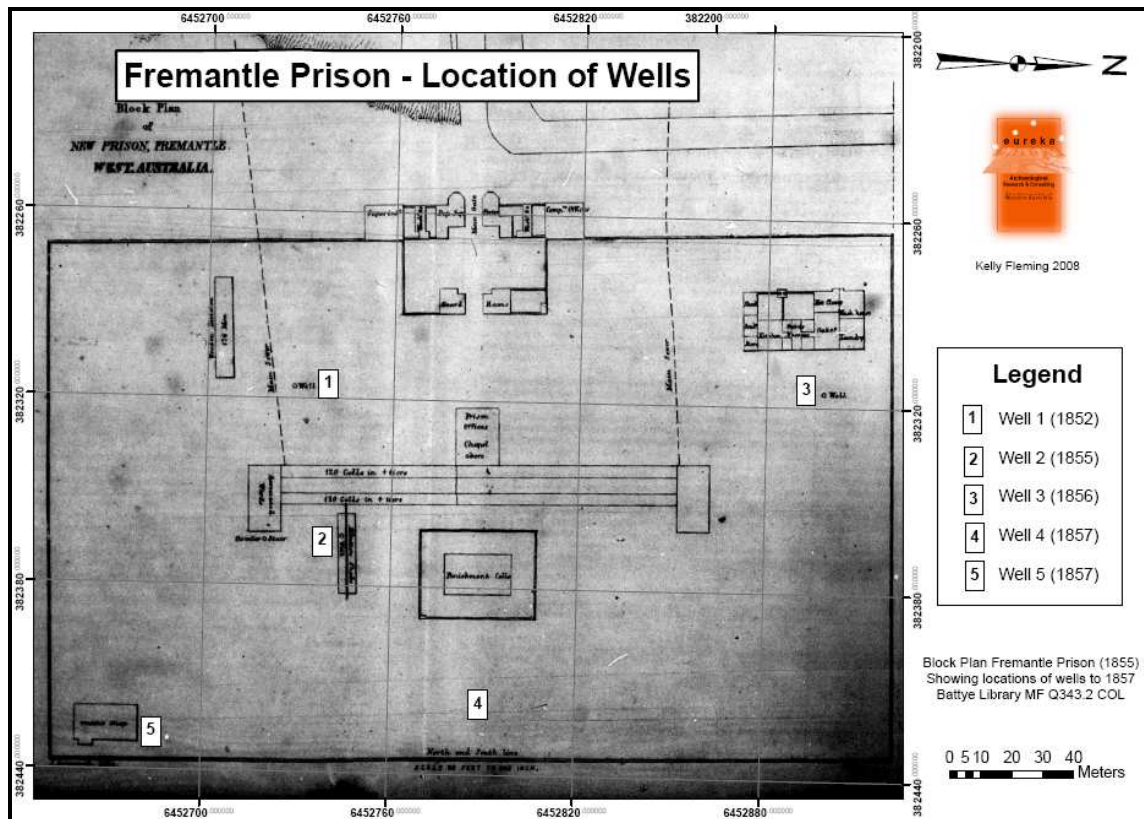


Figure 6. Plan showing structures Fremantle Prison in 1855 with well locations to 1857 (Royal Engineers' Office Fremantle - Capt. R.E [Wray] 1856). Well 1 located in Parade Ground development area.

By a process of elimination it may be suggested that the well in the Parade Ground Development area is the earliest, sunk in 1852. All other wells shown on plans can be accounted for. The well would have been central to the major works and the secondary source *Water, Walls & Yards* also

states that the first well is believed to have been in the south west area of the parade ground (Fremantle Prison Conservation & Future Use [Project] 1990b: 2.2.01).

Unfortunately no information regarding the stopping of this well was located. It appears on plans for 1855 (Royal Engineers' Office Fremantle - Capt. R.E [Wray] 1856) but not on any dated c.1890 (Penal Commission 1899 ; Public Works Department 1896). The paucity of plans for the intervening period makes it difficult to pinpoint a date. It is possible that when the water supply system was expanded in the late 1870s, particularly after completion of the long jetty in 1873 increased the need to supply more water for ships (Le Page 1986: 157; Western Australian Legislative Council [Hon M. Fraser] 1875: 29), this well became obsolete and was filled in. However, a reference in the *Votes and Proceedings* to the water tank constructed to supply shipping at Fremantle suggests the tank was supplemented during the dry season by water pumped from wells (Western Australian Legislative Council [Hon M. Fraser] 1875: 29). A reference to pumping water (by hand) for a large tank for the supply of shipping at the port appears in an 1879 report, so the tank and pipes to the port must have been constructed by this time and the well was potentially still in use for this purpose (Superintendent Fremantle Prison [Unknown] 1879: 583). Bavin (1990 [February]: 2.2.23) suggests the cisterns on the southern knoll were constructed in 1857. However, a return to the cited source provides evidence that the cisterns referred to were those associated with the bath house east of the main building (Royal Engineers' Office Fremantle - Clerk of Works [Manning] 1859b: 110) and the *Water, Walls and Yards* report also gives an 1876 date for the completion of the cisterns on the south knoll (Fremantle Prison Conservation & Future Use [Project] 1990b: 2.2.04). Further research may provide more details.

Information from plans suggests the well (1852) was positioned approximately 47 feet (14.3 m) from the southernmost corner of the front main cell block and then at a 90 degree angle, 82 feet (24.9 m), from the front of main cell block south. Its diameter was approximately 1.4 m (Public Works Department c.1857/1858 ; Royal Engineers' Office Fremantle - Capt. R.E [Wray] 1856). A sewerage and drainage plan dated 1899 places an inspection chamber in this approximate location 55 feet (16.7 m) from the southernmost corner of the front main cell block and 75 feet (22.8 m) west at a 90 degree angle to the front of the cell block (Penal Commission 1899: Plan 2). Georeferencing of this plan places the inspection chamber at 13.5m from the south corner and 21.9 m at a 90 degree angle to its centre. The dimensions are shown on plans as 4.3 x 4.3 Feet (1.3 x 1.3 m). These measurements would indicate that if the inspection chamber was constructed as per the plans, the well - just west of this location - would have been missed. However, on-site surveys confirmed that the inspection chamber was actually positioned approximately 3.5 m north of the position shown on plans and is unlikely to have impacted on the well at all.

Other potential intrusions within the well's approximate location include a number of small structures shown on plans just south of the well's location and a path leading to them from the east after at least 1980 (Fremantle Prison Conservation & Future Use [Project] 1990b). The functions of these structures are not labelled on most plans but the larger northernmost of the structures is indicated to



Plate 1. Photograph of interior Fremantle Prison reproduced in Bosworth (2004: 71)



Plate 2. Oblique photograph of Fremantle Prison (Gore 1935)

General correspondence files dating to 1948 suggest that *'portions of the roadways in the Gaol and exercise yards have been bitumenised [but that there is] still a large amount of roadway still requiring to be bitumenised'* then it is further mentioned that at present most of the roadways within the prison are surfaced with limestone or earth (Chief Secretary's Department 1949). This is further corroborated by an aerial photograph from 1948 (Landgate 1948). In March 1963 a note to the Superintendent suggests no action as yet had been taken with respect to Prison roads (Chief Secretary's Department 1963) which may be due to concerns regarding drainage raised during discussions of the matter in 1949 (Chief Secretary's Department 1949).

All of the above information suggests that the roads within the prison parade ground were initially metalled (surfaced) using limestone rubble and it is probable that when the prison parade area was being 'reformed' in approximately 1862, roads were included in this process (Superintendent Fremantle Prison [Lefroy] 1862a: 305). A reference to road construction in 1862 suggests the principal road was placed 'along and levelled to the entire front of the Prison' (Superintendent Fremantle Prison [Lefroy] 1862b: 179). No other evidence i.e. plans, were located to support the slightly deviated route of the southern end of the main central road as shown in Bavin (1990 [February]) besides this quote and it is probable she depicted it on plans in the 1990 report due to the suggestion it was 'levelled' to the front of the Prison (Superintendent Fremantle Prison [Lefroy] 1862b: 179). It is more probable the main internal road of the Prison maintained a similar route to that which it follows today. In the source Bavin cites, the Superintendent requests that he is sanctioned to 'make a wide metalled road along and levelled to the entire front of the Prison, and sweeping around the north and south [ends?] of it to the Hospital and the Blacksmith's shop respectively'*to make two other short roads leading at right angles from the abovementioned principal road to the wood stack and to the cookhouse respectively*' (Superintendent Fremantle Prison [Lefroy] 1862b: 179). This reference to 'sweeping around to the south' (Superintendent Fremantle Prison [Lefroy] 1862b: 179) would seem to agree with the current physical evidence. The current physical evidence and the documentary sources would also suggest that at some point between 1963 and the present day the roads were bitumened.

Parade Area & Grass and Shrubs

The Fremantle Prison Superintendent's letterbook refers to prisoners being 'employed during the last month in raising and breaking stone to reform the Prison parade ground' (Superintendent Fremantle Prison [Lefroy] 1862a: 305) and an earlier letter states...

'...both of the smaller Division yards and the great yard of this Establishment [remain in an] an unfinished state.....the levelling, flooring, concreting, road making, grass and shrub planting which are all requisite or desirable in different portions of the yards.....[he suggests these] improvements of our internal state and appearance might be gradually affected in an (?) manner, and without detriment to the supply of labour for the public works generally,..... [Prisoners

could be employed] in the gradual accomplishment of these improvements.....The particular improvements which I solicit authority to carry out in this way are the following.....'plant with grass and shrubs the whole of the remaining portions of the front yard, except a portion north, north side of the chapel and contained between the line of the proposed principal road and the northern half of the prison, which will be required for (assembling?) and parading the prisoners on' (Superintendent Fremantle Prison [Lefroy] 1862b: 178-179).

Although the above quote suggests the area directly in front of the north main cell block is included it takes in a greater proportion of the area for both the Parade Ground and the Garden and Shrubs. A plan in, *Water, Walls & Yards* (Fremantle Prison Conservation & Future Use [Project] 1990b) suggests that garden areas were established at either side of the parade area's main entry gate by 1930 and the parade area is shown to be more centrally located i.e. in the road itself. This is partly corroborated by the c. 1909 photograph which shows shrubs just inside and to the north of the parade gate (Bosworth 2004: 71 see Plate 1). No plans located to date show a garden area in front of the south main cell block and photographic evidence from both c.1909 (Bosworth 2004: 71) and 1935 (Gore 1935) demonstrate that this area was clear. Subsurface archaeological evidence may still be located to support the existence of these features, however it is also possible that the proposed garden and shrub planting of the larger part of the great yard was never undertaken and the 'parade area' was simply left clear rather than constructed for this purpose.

The current state of the Parade Ground appears to have been constructed after 1963. The roads were bitumenised at some point after this and the grass areas, as they appear today i.e. raised and lined with modern bricks, are likely to have been a post-c.1970/80 event. The photograph from 1935 (Gore 1935) suggests the grass areas are level with the road or only slightly raised (Plate 2). Further research, and an examination of the physical evidence, will likely resolve the date for the raised grass bed construction.

Shelter Shed

Construction of a timber, glass and cement shelter shed on the Prison parade ground in 1908 was confirmed (Superintendent Fremantle Prison [Jarvis] Officer in Charge of Works 1908: 118) but the specific location of the one mentioned in this source is unknown. The c. 1909 photograph of the prison parade ground (Plate 1) shows two shelter sheds and a rotunda west of the main roadway. The shelter shed described by Bavin, and referred to in the primary documents, is probably one of those in the photograph though only the rotunda is shown on a 1919 plan (Government Electrical Engineer 1919).

Laundry and Ablution Block

Plans for a new laundry/ablution block first appear in 1950 and research confirmed the former location of the structure, just inside the parade ground south of the main reception complex as it appears in Bavin (1990 [February] ; Chief Secretary's Department 1949), was confirmed. Further research indicated the block was completed in September 1964 and was constructed from timber, iron and asbestos (Chief Secretary's Department 1949 ; 1963).

Drains/Tunnels

The half yearly report of works in the Fremantle District for the six months ending 30th June 1855 states...

'...tunnels of the drains commenced last year have been driven up to the prison....cesspits in the flats have been made good..... [and have been] purposely sunk into rock, to avoid the expense of lining them with masonry'
(Royal Engineers' Office Fremantle - Capt. R.E [Wray] 1856: 207).

These are the main drains shown on the earliest plans running from each end of the main cell block under the west wall of the prison. Although their actual depth has yet to be determined, they are described as 'tunnels' so are presumably at a reasonable depth beneath the surface.

A Penal Commission Report published in the *Votes and Proceedings 1899* includes a plan showing the drainage and sewage conditions in the Fremantle Prison on 7th September 1898 and proposes a new system (Penal Commission 1899). The comments of J.P. Bedforth 'a sanitary engineer of large experience' are included in the appendix and it is probable the new system, with a few alterations as suggested by Bedforth, was completed at approximately this time (Penal Commission 1899: 78-80). The plans indicate that the old 6' x 3' drainage tunnels discussed above are to be stopped and a new drainage system established (Penal Commission 1899: Plan No. 2). If old drainage pipes have been removed it is likely that only limited physical evidence may be identified during the course of the parade ground development. However, as found during other ground disturbance works within the Fremantle Prison complex, it is also possible that many of these sub-surface features still remain (Eureka Archaeological Research and Consulting UWA 2008 [June] ; Fleming, Morse & Paterson 2008 [June]).

Bedforth suggests that surface drains should be avoided wherever possible (Penal Commission 1899: 78-79) so the drainage system within the parade ground may be far enough below the surface that limited ground disturbance will not encounter this infrastructure. If more extensive ground disturbance is planned e.g. for service trenches, this may encounter early drainage infrastructure. Although discussed above it is worth mentioning again here that by 1879 prisoners were pumping water for a large tank for the supply of shipping at the Port so the cisterns on the southern knoll,

possibly another tank, and pipes to the port had been constructed by this time (Superintendent Fremantle Prison [Unknown] 1879: 583). Again the depth of this infrastructure is unknown but plans show a 4" iron 'scour pipe' leading from the reservoir on the southern knoll (Penal Commission 1899: Plan No. 1) and cutting across the former location of the wooden division.

PROJECT DESIGN AND METHODOLOGY

METHOD

Following detailed background research into the location of potential archaeological features within the parade ground development area, a series of four targeted trench locations were chosen for excavation (Figure 4). These trench locations were intended to confirm and document the presence or absences of potential archaeological features identified during the background research; as well as provide information on the depth of these features for future planning purposes. The excavation process was designed to be as non-invasive as possible.

The location of the excavated trenches varied slightly from those initially suggested in the Stage 1 GIS predicative model report due to a number of factors, including time and budgetary constraints, accessibility and the revision of findings following additional historical research (Table 4, Eureka 2008 a & b). The size of the development area was also reduced and no longer included the southern most portion of the prison (shed and incinerators were no longer in the study area.) The chosen orientation and location of the excavated trenches was designed to capture a cross section of each of the key archaeological features identified during the background research.

<i>Area (Stage1)</i>	<i>Area (excavation)</i>	<i>Potential Feature</i>	<i>Excavated</i>
1	1	Wooden Division	Yes
	3	Wooden Division	Yes
2	2	Well c. 1858	Yes
3	-	Incinerators	No – no longer in development area
4	-	Shed	No – no longer in development area
5	5	Metalled Road	Yes
6	-	Garden	No – due to time constraints and low archaeological potential
7	-	Parade Ground	No – historical evidence could not confirm location of this feature as different from the main parade ground

Table 4. Trench areas excavated compared with those proposed in the initial GIS predicative model.

Prior to excavation the parade ground was inspected for working electrical and water infrastructure by using a remote sensing, handheld pipe and cable locator. For safety reasons, trenches were moved to avoid impacting these areas. On site, trench locations were mapped out using handheld metre tapes. Existing structures (i.e. south west corner of the main cell block, main cell block wall) were used as common reference points for plotting the location of each trench. A small mechanical excavator and front loader were used to remove the grass/bitumen, topsoil and any modern fill in

each trench prior to excavation with handheld trowels and shovels. All mechanical earth removal was monitored by an archaeologist.

All trenches were excavated by hand using trowels and hand shovels. Where necessary, a geo-pick, patiche, or a mattock was used to break up hard deposit. All deposit removed from exploratory trenches was sieved with 6 mm and 3 mm screens. All artefactual material was bagged and labelled according to its trench, stratigraphic context and material type and retained for further analysis. A sample of building materials and soils were also recorded.

The excavation was recorded using a Leica Total Station and digital camera. The survey plotted the location of artefactual concentrations, the spatial extent of features such as structural remains, and of archaeological excavations. This information was used to generate a site plan linked to other field records such as paper recording forms, digital photographic images and plans. Section drawings indicative of the stratigraphy were made. Excavation units were recorded sequentially using the single context recording system and their stratigraphic relationships demonstrated using a Harris Matrix (Appendix 1). Historical documents were used to assist in the interpretation of the archaeological deposit.

Primary sorting of excavated material into classes of material (glass, ceramic etc.) occurred on site during the excavations. It is recommended that the detailed post-excavation analysis of survey data and excavated material could be conducted at by an Archaeology Honours student for the University of Western Australia. This research would provide an enhanced version of this report submitted. Following analysis excavated material is intended to be returned to the Fremantle Prison collection.

Members of the Combined Metropolitan Working Group, the local Aboriginal Native Title Claimants (Vanessa and Trina Corunna) were invited to attend each of the excavation days. Where material of potential Aboriginal significance was identified during the excavation (i.e. a tooth), all work ceased until it was possible to confirm that artefacts were not of Aboriginal significance or of human origin.

Area 1 and Area 3 (Wooden Division)

Area 1 and Area 3 (Wooden Division) was excavated on 2nd- 6th and 13th October 2008. On consideration of historical data and accessibility of the area, the decision was made to excavate two trenches in the hope of capturing archaeological evidence of the convict built Wooden Division (i.e. structural or cultural materials). Historical sources suggested that the building was standing in the area on government plans c. 1856 (Eureka 2008 b). The location of the trenches was intended to capture the northern and southern extent of the structure and/or evidence of its use, as identified from its location on relevant historical plans. The trenches were located in areas away from existing electric/water infrastructure and other known disturbances which may have impacted upon the archaeological deposit. The Area 1 trench (northern alignment) was 1 x 4 m. It was located in the

northern most grassed area on the southern terrace (Figure 4). The Area 3 trench (southern alignment) was 1 x 5 m. It was located in the southern section of grass, on the southern terrace and ran parallel to the wire security fence line (Figure 4).

Area 2 (Well)

Area 2 (Well) was excavated on the 14 -15th and 22nd August 2008. The location of the trench was intended to capture the c. 1852 well identified on relevant historical plans (Eureka 2008 b). The trench was located in areas away from existing electric/water infrastructure and other known disturbances which may have impacted upon the archaeological deposit. The Area 2 trench was 2 x 5 m and was located on the western grass area, in front of the south main cell block and north of the entrance into this cell block (Figure 4).

Area 5 (Metalled Road)

Area 5 (Metalled Road) was excavated on the 14 -15th and 22nd August 2008. The aim of this trench placement was to locate the alignment of the original limestone metalled road, known to have been situated within this general area from historical maps and sources (Eureka 2008 b). The trench was located in areas away from existing electric/water infrastructure and other known disturbances which may have impacted upon the archaeological deposit. The Area 5 trench was 2 x 6 m and was located on the western grass area, in front of the south main cell block and south of the entrance into this cell block. The trench was located partially over the current bitumen road and partially over the grassed area (Figure 4). The bitumen was removed by mechanical excavator and front loader, whilst being monitored by an archaeologist.

EXCAVATION TEAM

<i>Team Member</i>	<i>Position</i>	<i>Institution</i>
Alistair Patterson	Senior Archaeologist	University of Western Australia, Eureka Archaeological Research and Consulting
Sarah Burke	Archaeologist	Eureka Archaeological Research and Consulting
Sean Winter	Archaeologist	Eureka Archaeological Research and Consulting
Kelly Fleming	Archaeologist	Eureka Archaeological Research and Consulting
Illya Sparkes – Santos	Archaeologist	Eureka Archaeological Research and Consulting
Rebecca Yit	Archaeologist	Eureka Archaeological Research and Consulting
Jim Steadman	Archaeologist	Eureka Archaeological Research and Consulting
Shuan Mackey	Archaeologist	Eureka Archaeological Research and Consulting
Vanessa Corunna	Monitors	Combined Metropolitan Working Group
Trina Corunna	Monitors	Combined Metropolitan Working Group

RESULTS

The results presented in this report provide a brief overview of the stratigraphic sequence and the findings pertinent to the proposed development of the Fremantle Prison parade ground. Further research into the artefactual assemblage collected during this excavation has the potential to provide a more comprehensive understanding of the archaeology uncovered. It is recommended that this is undertaken and a more detailed amended version of this report is produced. Figure 4 provides an outline of excavation trench location and predicted archaeological features. Figure 12. provides a revised plan of predicted archaeological features and areas of sensitivity based upon the results of the excavation.

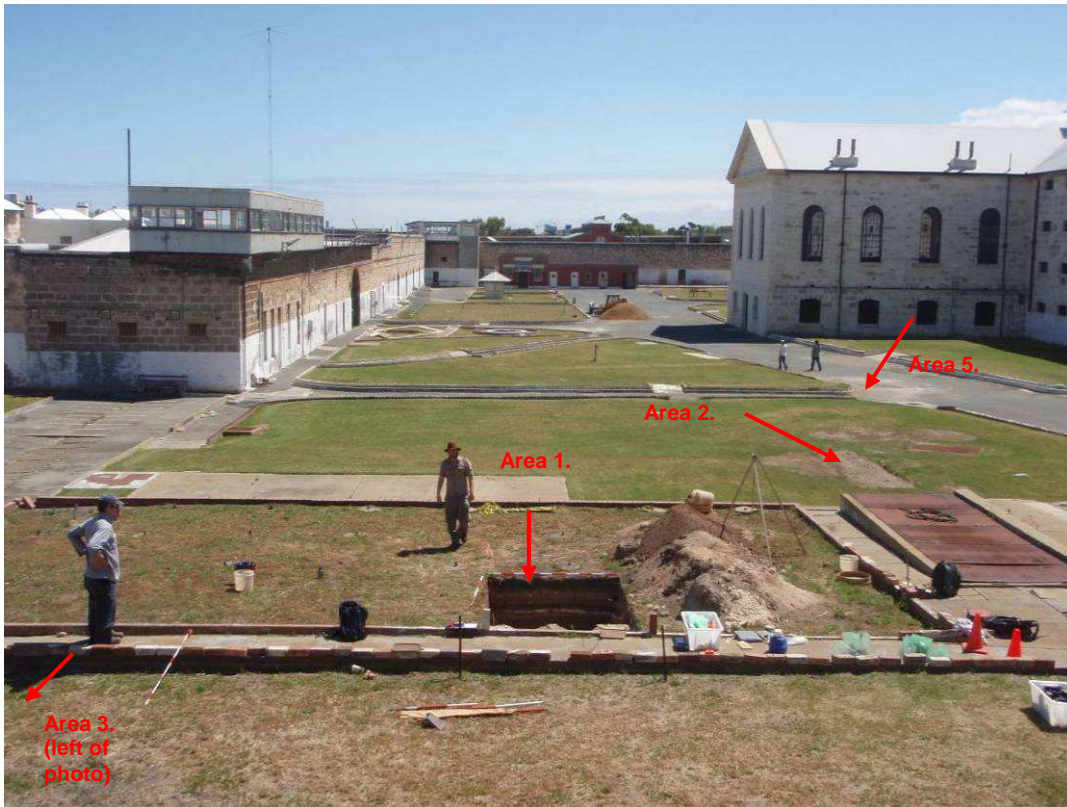


Plate 3. Overview of Fremantle Prison parade ground and trench locations – facing north.

AREA 1 (WOODEN DIVISION)

Stratigraphy

Excavation of the Area 1 trench identified the following features:

- Turf (001) overlaying recent soil deposit (027) to a depth of 15 cm below the surface. This is likely to relate to more recent gardening activities.

- The northern extent of the trench revealed several layers (032, 033, 036, 037) of c. early 20th century cultural deposit which have been identified as successive episodes of rubbish dumping off the edge of the terrace (between a depth 15 – 170 cm). Materials identified in these layers included slate pencils, glass, ceramic, metal buttons, bone, a tooth, leather and glass light bulbs.
- The southern extent of the trench was much shallower than the northern and revealed a silty grey deposit, c. 1950's (038) and a layer of mixed crushed limestone (039), at a depth 15 - 35 cm below the surface.
- The deposits within the southern extent of the trench correspond with those in the trench in Area 3.
- These deposits lay over sterile deposit of yellow/orange sand (040) considered to be natural deposit (depth 30 - 40 cm).
- Areas of disturbance noted through the trench included the more recent installation of two concrete footings (028, 035) to support a structure (no longer *in situ*) which occupied an area along the northern section of the terrace.

A detailed stratigraphic sequence showing the results of the excavation is provided in Figure 8
Further stratigraphic information is provided in Appendix 1 and 2:

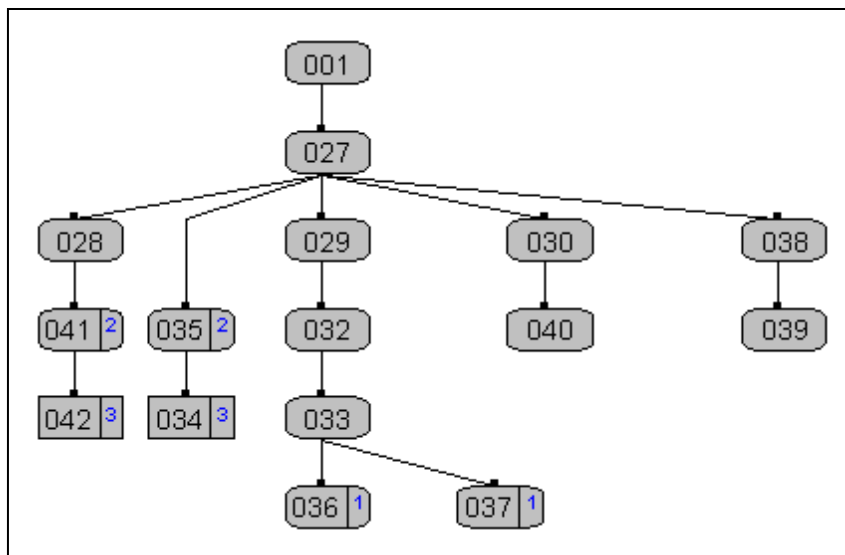


Figure 8. Area 1 (Wooden Division) stratigraphic sequence (Appendix 1).



Plate 4. Area 1 (Wooden Division) - facing north. Stratigraphic context showing shallow limestone bedrock (south end of trench) and deep layers of refuse dumping (north end of trench).



Plate 5. Area 1 (Wooden Division) – east facing section of trench. Layers of refuse dumping evident in stratigraphy.

Summary

The current terrace consists of truncated bedrock overlain by a thin layer of topsoil in the central parts of the terrace. No evidence was found during the excavation for the use and construction of the wooden division, although it may well exist on the terrace in another location.

Given that historical evidence suggests the wooden division structure was a temporary wooden structure built on 'plates', it may be that only limited physical evidence relating to the structure remains. However, it is still possible that some archaeological material relating to the period remains *in situ* and/or the actual location of the building was not within the boundaries of the current excavation trenches.

Bedrock is largely absent along the terrace towards the parade ground (north); here layers of refuse constitute landfills (i.e. successive episodes of rubbish dumping) which have formed the current topography (depth 15 – 170 cm). Artefactual material recovered from these layers date from the late 19th C to mid 20th century. This suggests there are several metres of the terrace wall facing the parade ground that have 20th century deposits. Any remaining evidence for the wooden division is therefore likely to occur within the southern extent of the terrace (from a depth of 10 – 40 cm).

Some disturbance has also occurred along the terrace through gardening and turning over of soil, installation of a structure with concrete footings, pathways, reticulation and electric and water infrastructure.

AREA 3 (WOODEN DIVISION)

Stratigraphy

Excavation of the Area 3 trench identified the following features:

- Turf (001) overlaying recent soil deposit (027, 031) to a depth of 15 cm below the surface. This is likely to relate to more recent gardening activities.
- The deposits within this trench correspond with the deposits identified in the southern section of the trench in Area 1.
- A mixed deposit with some modern materials (031) overlays a layer of mixed crushed limestone (030) at a depth 15- 35 cm below the surface. Some cultural material (c. 20th century) was recorded in this layer.
- Below these deposits a darker possibly humic soil was identified along the southern edge of the trench (045) (depth of 20- 40 cm). This could possibly relate to an earlier drainage feature, though no historic evidence of its presence has been identified to date.

- The limestone and humic deposits over lay two sterile deposits of yellow (040) and white (044) sands which are considered to be natural deposit (depth 30-40 cm).
- Areas of disturbance noted through the trench included the more recent installation of piping, and a modern disturbance in the northern extent of the trench which may correspond with the excavation trench dug by Bavin (1990b).

A detailed stratigraphic sequence showing the results of the excavation is provided in Figure 9
Further stratigraphic information is provided in Appendix 1:

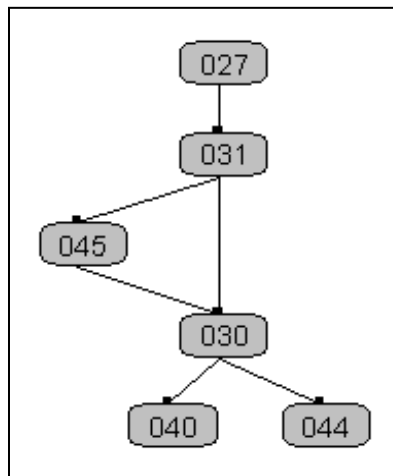


Figure 9. Area 3 (Wooden Division) stratigraphic sequence (Appendix 1)



Plate 6. Area 3 (Wooden Division) – facing north. Photograph showing final excavation depth.



Plate 7. Area 3 (Wooden Division) – east facing section of trench.

Summary

The current terrace consists of truncated bedrock overlain by a thin layer of topsoil in the central parts of the terrace. No evidence was found during the excavation for the use and construction of the Wooden Division, although it may well exist on the terrace in another location.

Given that historical evidence suggests the wooden division structure was a temporary wooden structure built on 'plates', it may be that only limited physical evidence relating to the structure remains. However, it is still possible that some archaeological material relating to the period remains *in situ* and/or the actual location of the building was not as shown in the early plans and therefore not within the boundaries of the current excavation trenches.

The deposits uncovered in the Area 3 trench are similar to those recorded in the southern portion of the trench in Area 1. Bavin's trench was also excavated nearby and the stratigraphy was similar to that observed in this trench. Bavin was also unable to locate any trace of the wooden division structure (1990b).

Some disturbance has also occurred along the terrace through gardening and turning over of soil, installation of a structure with concrete footings, pathways, reticulation and electric and water infrastructure. A modern disturbance in the northern extent of the trench may correspond with the excavation trench dug by Bavin (1990b).

AREA 2 (WELL C.1852)

Stratigraphy

Excavation of the Area 2 trench identified the following features:

- Modern turf (001) overlays soil deposits (011) containing artefactual material (structural material, timber, modern wiring, bone, slate and nails). The artefactual material is mostly recent with some older material possibly being redeposited through the actions of construction and demolition of buildings and other installations in the 20th century.
- This area was the site of several laundry buildings and the upper areas of this excavation trench may reflect these activities (011, 012 and 023).
- Underneath these more recent layers, were less artefact rich, mixed deposits (014, 021) with some structural material (slate, old iron nails and crushed limestone).
- These in turn overlay bedrock (022) at a depth of approximately 66 cm which occurs as a limestone outcrop with no associated yellow/orange sand, as was recorded in the trench in nearby Area 5 (010).
- At the far northern end of the trench, a limestone layer (020) similar in material and construction to one located in Area 5 (009) was partially revealed (depth 41 cm). This

appears to overlay the older (possibly 19th century) redeposited soils (021) in some sections of the trench. This evidence suggests that it is a cultural deposit such as a path or hard surface. There is no map indicating a path/road in this area, however the majority of plans fail to refer to the route of roads and paths.

A detailed stratigraphic sequence showing the results of the excavation is provided in Figure 10. Further stratigraphic information is provided in Appendix 1:

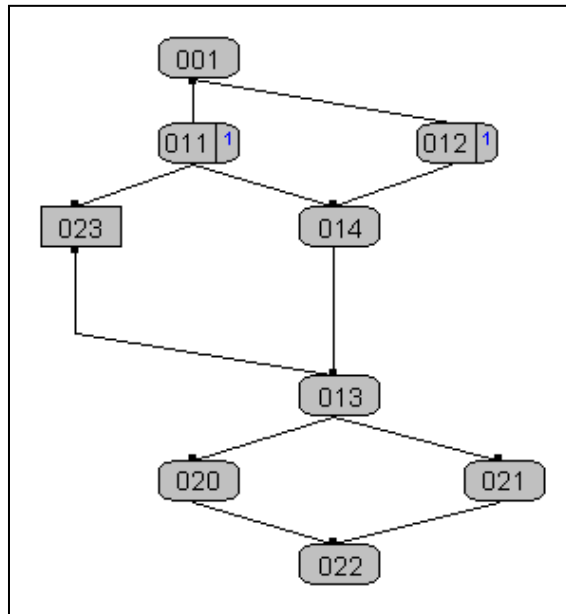


Figure 10. Area 2 (Well) stratigraphic sequence (Appendix 1)



Plate 8. Area 2 (Well) – facing north. Photograph showing final excavation depth. Utilities trench (foreground) showing recent disturbance to the area.



Plate 9. Area 2 (Well) – east facing section of trench. Shows garden soil overlaying older layers characterised by presence of crushed limestone.

Summary

The c. 1852 well was not located during the excavation of Area 2. It should be noted that the trench could not be dug in the preferred area immediately adjacent to Area 2, as remote sensing revealed an electrical cable had been installed here. Based upon the stratigraphy found during the excavation of the Area 2 trench it is suggested that the top of the well would be located at the depth of the basal deposit, a maximum of 66 cm below the current ground level. The crushed limestone layer (020) located in the far northern end of the trench at a depth of approximately 41 cm was identified as being a possible path or other hardened surface. There is historical evidence to confirm this interpretation (Fleming 2008). Some disturbance has also occurred along the terrace through gardening and turning over of soil, installation of a structure with concrete footings, pathways, reticulation and electric and water infrastructure.

If any construction was to occur in the area it should not go below a depth of more than 40 cm below the current surface. If ground disturbance is to take place below this depth it is possible that archaeological material (i.e. the well) may be disturbed.

AREA 5 (METALLED ROAD)

Stratigraphy

- The turf (001) overlays recent soils (005, 007) which in turn overlay mixed deposits within a large pit (008). This pit was cut deep (+40 cm) into the basal yellow/orange sand (010). The pit was full of historical waste, dominated by butchered animal bone (much of which it cattle), as well as artefacts (clothing parts such as metal heels, buckles, eyelets; crockery; glass bottles semi-mould; charcoal). This cut was identified as a 19th century rubbish pit (008).
- The pit (008) is located adjacent to (and possibly cuts into) a compact limestone deposit (009) identified as the original road surface.
- The crushed limestone deposit (009) is between 20 - 30 cm thick. This appears to be an earlier road/parade ground surface. This deposit appears to follow the path of the current road although the sample trench has only exposed an area of two metres.
- The crushed limestone deposit (009) is located 10 -12 cm underneath the modern bitumen surface (002, 003) and re-deposited soils (004, 006) which contain some cultural materials (ceramic, glass, bone, boot heels, slate fragments, nails, bottle glass, light bulb fragments).
- The crushed limestone layer (009) overlays orange sand (010) and limestone bedrock (022), which are considered to be natural deposits.

- The excavation also exposed an old trench with a metal pipe *in situ* (depth approx 13 - 23 cm), running in a general north south direction along the edge of the road. The trench appears to have cut into the original compact limestone road surface (009).

A detailed stratigraphic sequence showing the results of the excavation is provided in Figure 11. Further stratigraphic information is provided in Appendix 1 and 2:

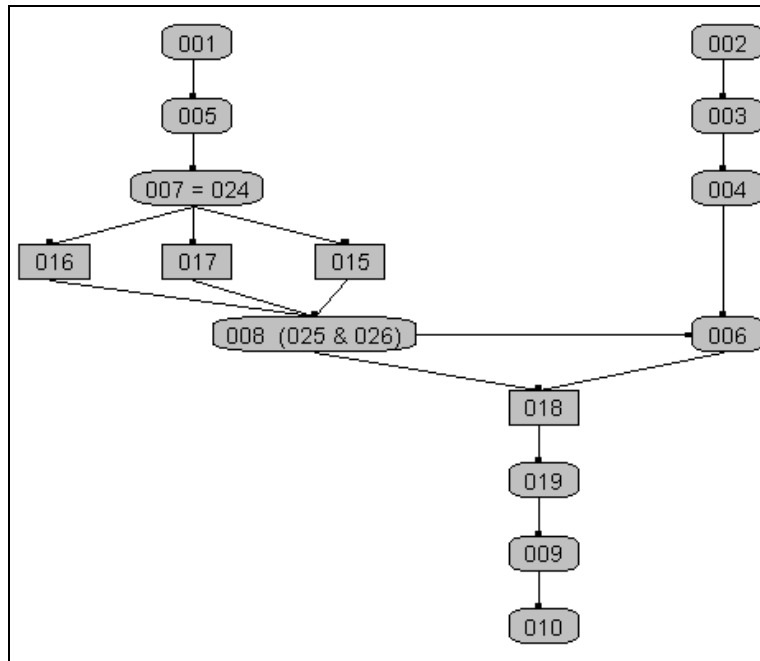


Figure 11. Area 5 (Metalled Road) stratigraphic sequence (Appendix 1).



Plate 10. Area 5 (Metalled Road) – facing south east. Possible limestone metalled road (009) indicated with red arrow. Refuse pit in western section of trench.



Plate 11. Area 5 (Metalled Road) – facing west. Trench after removal of limestone layer (009) to sterile deposit (010). Refuse pit (008) located in western most section of trench.



Plate 12. Area 5 (Metalled Road) – east facing section of trench. Crushed limestone layer (009) indicated by red arrow. Refuse pit (008) with dense bone deposit shown to right of photo.



Plate 13. Area 5 (Metalled Road) – south facing section of trench. Crushed limestone layer (009) possibly original metalled road shown clearly in stratigraphy.

Summary

Background research suggests that compacted limestone surface uncovered in Area 5 may be the original 'metalled' road surface (Fleming 2008). The earliest description of the proposed road is 1862, which describes a road in front of and parallel to, the main cell block with two branches extending along the north and south main cell blocks to the Hospital and Old Workshops (Superintendent Fremantle Prison [Lefroy] 1862:178 -179). The earliest photographic evidence for the road dates to 1909; there are no details of roads in the main 19th and 20th century survey maps (reproduced in Bosworth 2004:71; Fleming 2008). The alignment of the limestone surface follows that of the current bitumen road (similar to the description above) and it is likely that this has varied little over time.

Any development work deeper than 10 cm below the surface of the bitumen is likely to disturb the original limestone road surface. It is also possible that the limestone road extends beyond the bitumen, under the current lawn area. This could not be confirmed as the refuse pit had cut into the road, obscuring its original boundary alignment. Bavin excavated a trench immediately south of Area 5 whilst also attempting to locate the original metalled road surface (1990 b). The road was not located during her excavation and the stratigraphy from this earlier excavation trench was closer in characteristics to that encountered in Area 2 (Well), rather than Area 5 (1990 b). These findings also confirm the limestone metalled road is likely to follow an alignment similar to the current bitumen road and not extend very far into the grassed area.

Historical photographs (c.1900), as well as evidence observed during the excavation indicate that the lawn area has been raised approx. 30 cm above the bitumen road level in the recent past. As such any archaeological features within the grassed area are likely to be further below the surface than the bitumen road

Some disturbance has also occurred within the area through gardening and turning over of soil, digging of refuse pits, installation of pathways and electric and water infrastructure. These may have impacted upon potential archaeological features in various ways. It should be noted that some activities may also represent archaeological information not recorded in the historical record. For example, the nineteenth century pit and refuse dump excavated in this trench (008) has the potential to inform on prison life (i.e. the program of waste dumping within the prison, prison diet). It is possible that other refuse dumps may be encountered within the parade ground.

INTERPRETATION AND DISCUSSION

Archaeological excavations undertaken in the Fremantle Prison parade ground confirm that the prison complex is an archaeologically sensitive area across the site. No major structural buildings are known to have been built within the parade ground area; however ancillary buildings and infrastructure important to the operation of the prison are known to have existed. These cultural

remains have the potential to inform on more than the architectural history of the prison, contributing to a holistic understanding of changing use of the prison over time.

The excavation was successful in locating the original limestone road that was installed along the front of the main cell block. This road functioned as part of the necessary prison infrastructure from the mid 19th century and would have been used by staff, prisoners and visitors alike. It is a significant feature of the original parade ground layout. The continued use of the original alignment up until the present day reinforces the necessary function of this main road within the prison. The use of limestone to create the road base confirms the historical records describing the use of local materials in the construction of the prison wherever possible. This material would have been a readily available and a cheap by-product of the building activities taking place throughout Fremantle. Whilst primarily of a utilitarian function, this limestone road would have contributed to the stark and austere aesthetic of the prison parade ground, reinforcing the dominance of the main cell block and its purpose as a place of incarceration and punishment.

Whilst not all potential archaeological features were located by the current excavation program (c.1852 well and wooden division were not uncovered), it is possible that such features still remain *in situ*. Existing documentary evidence relating to the use of the parade ground is limited, and often contradictory when describing the construction and or demolition of specific features. The findings of the excavation also confirm that prison activities not documented in the historical resource were also taking place. For example, it appears that sections of the open areas of the prison were used for waste disposal. This was also confirmed by Bavin's 1990 excavations throughout the prison (1990 b).

Interestingly, other recent archaeological excavations within the Fremantle Prison complex have also confirmed that many subsurface features (i.e. demolished structural features, old drainage pipes) remain *in situ* (Eureka 2008 c).

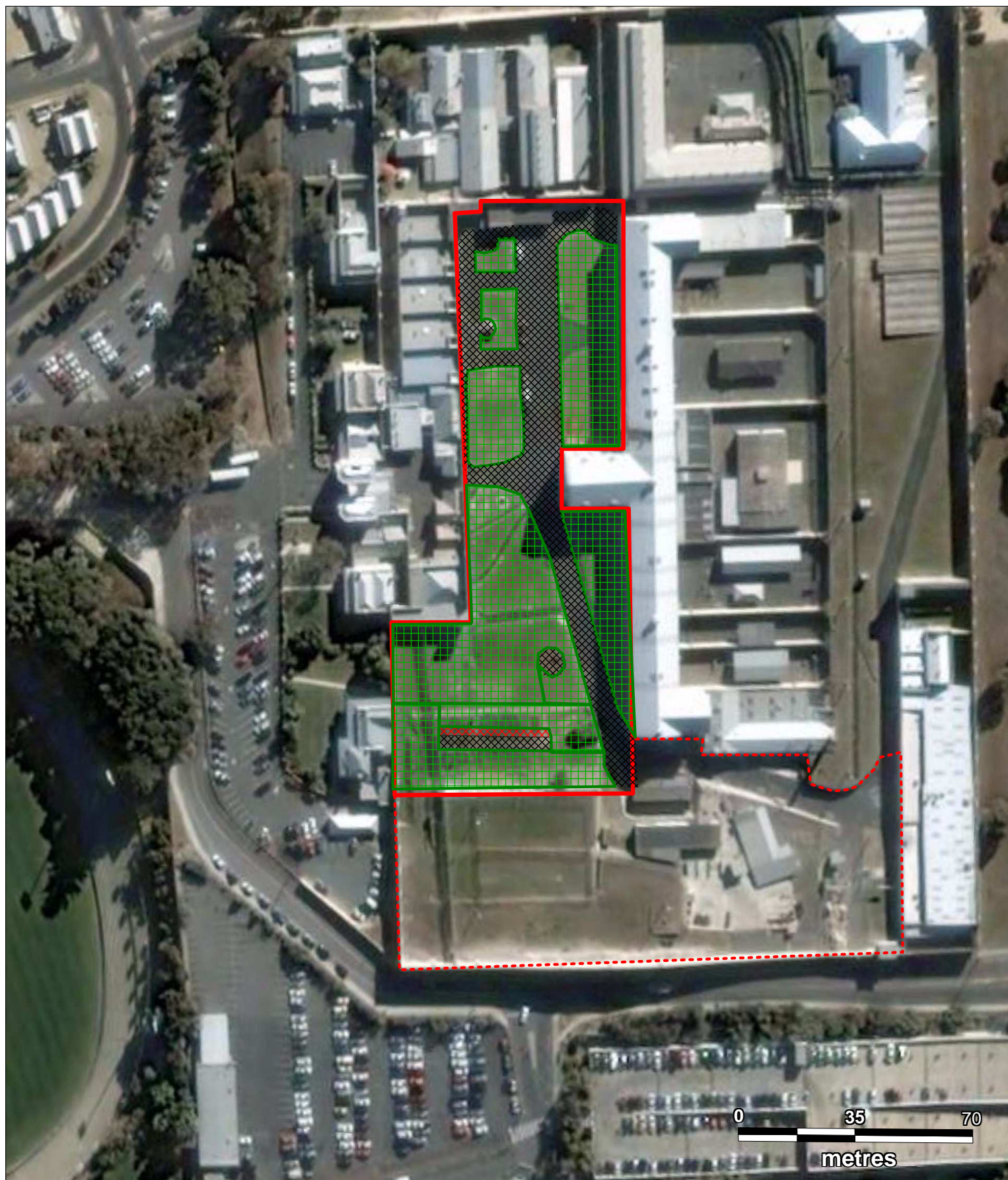
The current test excavations confirm that the removal of any paving or turf has the potential to reveal archaeological deposits across the site. It is likely that in most grassed areas within the parade ground development area, modern turf overlays more recent soils initially, which in turn may overlay other, older 19th century archaeological features, such as paths, old drainage pipes, other drainage features and rubbish deposits. The existing bitumen road is also likely to overlay and correspond to the original limestone 'metalled' road alignment, which the excavation has confirmed remains *in situ*.

Bedrock and/or sterile layers were recorded at different depths across the parade ground. In areas where soil has been built up for lawn/gardening areas it is up to 60 cm below the current surface, whereas the existing bitumen road is only approximately 35 cm above the sterile layer. Along the southern terrace, successive episodes of waste dumping have artificially extended the northern face of the wall for approximately 2 m, with no bedrock observed. South of this, the






actual terrace has a shallow deposit, reaching bedrock at a depth of approximately 30 – 40cm below the current surface.

Some disturbance to the integrity of the archaeological record was observed to have occurred within the parade ground in the form of utility trenching, gardening activities, construction and demolition of more recent auxiliary buildings. However these are area specific and do not appear to impact significantly on the archaeological material/features identified to date. These activities reinforce the continued use of the prison up until the very recent past and may be considered a continuation of the prison timeline until its closure in the 1990's.

Figure 12: Archaeological Zoning Plan



Legend

<p>Created on the 28.01.2009 by eureka archaeological research and consulting UWA</p> <p>Map data provided by Map Data Sci & City of Fremantle UTM MGA94 Zone 50K</p>	<p>Archaeological Zoning</p> <ul style="list-style-type: none"> Zone A Zone B Zone C	<p>Development Boundary</p> 	

PROJECT IMPACTS

The aim of this report is to input archaeological advice to the planning process, so that impacts to the cultural heritage are avoided or kept to a minimum. At the time of writing this report the Fremantle Prison parade ground redevelopment project is currently in the planning stages, no design plans have been assessed and as such it is not possible to determine specific impacts of development on the archaeological heritage associated with the Fremantle Prison parade ground.

Test excavations completed to date indicate that while no major architectural features are likely to be disturbed during the proposed works, other features such as ancillary infrastructure or cultural material remains associated with the day to day use of the prison may be uncovered. The potential archaeological features identified in the GIS model (Figure 4) may also still be *in situ* despite not being uncovered during the current excavation described here.

A revised archaeological zoning plan has been created based upon Bavin's three zones of archaeological sensitivity and the results of the current excavation (1990a and b). It is intended that this may provide some guidance on archaeological sensitivity of the parade ground (Figure 12).

In order to limit impacts to the archaeological cultural heritage it is suggested that where possible ground disturbance works **should not** go below the following depths (Figure 12):

Area	Archaeological Sensitivity Zone	Depth (cm)
Bitumen	A	10
Grass	A & B	30
South Terrace (north – wall to 2 m south)	C	No constraint
South Terrace (south)	A	10

Table 5. Fremantle Prison parade ground: estimated depths for archaeological sensitivity

RECOMMENDATIONS

- Care must be made to ensure that development design does not have an adverse impact on the significant heritage values of the Fremantle Prison complex as a whole.
- Consultation with the Heritage Council of Western Australia must be undertaken as part of the planning process associated with the redevelopment of the Fremantle Prison parade ground as part of the *Heritage Act of Western Australia 1990*.
- Any proposed development work that is likely to have a significant impact on the National Heritage values of the Fremantle Prison complex must be referred to the Federal Minister for approval under *Environment Protection and Biodiversity Conservation ACT 1999* (EPBC ACT).
- Any further ground disturbance work should be undertaken in consideration of an archaeological plan of management for Fremantle Prison.
- Monitoring of **any** ground disturbance works within the parade ground should be undertaken by a suitably qualified archaeologist.
- Where archaeological remains are uncovered during monitoring or construction works, work must cease and an archaeologist must assess the significance of the features/materials uncovered and determine the best course of management regarding these deposits

It is recommended that in areas identified as having:

- **No to Low Archaeological Value:** Archaeological remains may be removed and works continue.
- **Moderate Archaeological Value:** Archaeological features with moderate archaeological significance must be accurately recorded *in situ* prior to any disturbance by construction works. A decision will then be undertaken on a case by case measure as to whether it is possible to avoid disturbing the archaeological feature, or if it needs to be removed prior to construction works beginning. Interpretation and/or display may be used to explain the importance of such archaeological features in relation to Fremantle Prison once they have been removed.
- **High Archaeological Value:** All efforts should be made to avoid disturbing archaeological features with high significance and ensure they remain *in situ* wherever possible. If it is not possible to avoid disturbing features which high archaeological significance, they must be accurately recorded *in situ* prior to their removal. Interpretation and/or display may be

used to explain the importance of such archaeological features in relation to Fremantle Prison once they have been removed.

- Any removal of material as part of the proposed parade ground redevelopment project requires careful management decisions, in keeping with archaeological best practice and the Burra Charter. These decisions may include keeping some archaeological features *in situ*, or perhaps conducting sites works above older archaeological deposits.
- The excavated material is made available for a student at University of Western Australia to analyse as part of an Honours project.

In addition, Eureka would suggest the following recommendations with regards to specific areas within the parade ground:

Bitumen

- Ground disturbance works should not exceed a depth of 10 cm below the surface as it is possible that archaeological remains are present below this depth.

Grassed Area

- Ground disturbance works should not exceed a depth of 30 cm below the surface as it is possible that archaeological remains are present below this depth.

Southern Terrace

- Where possible ground disturbance works should be situated along the northern extent of the terrace (within approximately 1.5 m of the northern edge).
- Ground disturbance works should not exceed a depth of 10 cm below the surface along the southern extent of the terrace as it is possible that archaeological remains are present below this depth.

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APPENDIX 1. STRATIGRAPHIC CONTEXT: FREMANTLE PRISON PARADE GROUND

Well c. 1852. (Area 2), Metalled Road (Area 5), Wooden Division (Areas 1 and 3)

<i>Unit Number</i>	<i>Unit Type</i>	<i>Description</i>	<i>Cultural deposit</i>	<i>Depth below surface (cm)</i>	<i>Area</i>
001	Surface	Turf			1,2,3,5
002	Deposit	Asphalt tarmac			5
003	Deposit	Orange clay road base		3-5	5
004	Deposit	Fine grey silty sand with charcoal and artefacts	Ceramic, glass, bone and metal	5-9	5
005	Deposit	Black humic soil (garden soil)	Ceramics (stoneware), Bone (mainly cow), nails (structural), boot heels, slate fragments, clear bottle glass	5-25	5
006	Deposit	Compacted limestone and rubble	bottle glass, slate fragments, building material, brick, animal bone, shoe heels, nails, bolts, wiring, light bulb fragment, crockery fragments	8-15	5
007	Deposit	Orange/yellow sand underlying 005		28-50	5
008	Deposit	Dark brown soil – mixed deposit – refuse fill	Metal structural material, timber fragments, ceramics, bone glass, slate, shoe eyelets and heels, pipe fragment, oyster shell fragments, plastic, 4xsmll buckles	35-85	5
009	Deposit	Limestone crushed layer – possible original metalled road	Crushed limestone road base	11-26	5
010	Deposit	Yellow sand		26-90	5
011	Deposit	Dark loamy soil with lens of builders sand (012)	Structural material, concrete, plastics, timber, modern wiring, bone, slate, nails		2
012	Deposit	Yellow sand lens			2
013	Deposit	Orange/yellow sandy soil			2
014	Deposit	White limestone rubble			2
015	Cut	Cut for 008			5
016	Cut	Cut for refuse 008			5
017	Cut	Cut for 008			5
018	Cut	Cut into 009 - made for metal pipe		13-32	5

Unit Number	Unit Type	Description	Cultural deposit	Depth below surface (cm)	Area
019	Deposit	Loose fine grained limestone sand deposit - Fill for 018	Metal pipe <i>in situ</i>	13 -32	5
020	Deposit	Crushed limestone layer adjacent to 021. Similar to 009 in area 5 – possibly road path surface?			2
021	Deposit	Grey sandy soil with limestone inclusions, overlays bedrock 022	Some cultural material		2
022	Natural	Limestone bedrock	Sterile		2 and 5
023	Cut	Cut for possible post hole cut into 013 and 021			2
024	Deposit	Yellow sand same as 007		28-50	5
025	Deposit	Mixed dark brown soil. Excavated as 008		25-45	5
026	Deposit	Mixed soil with crushed limestone, yellow and grey sandy soils. Excavated as 008.		45-64	5
027	Deposit	Black humic soil (garden soil)	Glass (clear and amber), plastic, metal	22	1 and 3
028	Deposit	Concrete footing		54	1
029	Deposit	Brown sandy deposit. Charcoal. Mixed soils - located in north half of trench	Rubbish rich soil c. late 19 th to early 20 th century. Building rubble, slate pencils, buttons, bone, ceramic, glass, clothing studs, metal tin lid, large amounts of metal	15-45	1
030	Deposit	Crushed limestone matrix – south half of trench	Plastic comb fragment, light globe, battery (?)	15-35	1
031	Deposit	Mixed soils	Slate pencils, ceramic, small amounts of glass		3
032	Deposit	Dark reddish brown silty clay – located in north half of trench	Rubbish deposit. Textile, bone, metal, ceramic (c.1940's, slate, buttons, clothing studs, building rubble, colourless window glass, light globes, bottle glass	15-55	1
033	Deposit	Grey/brown mixed soils in lenses – located in north half of trench	Rich cultural deposit, leather, boot heel fragments, large amounts of building material, tooth, enamel, ceramic, burned paper, glass bottles c. 1920's -1930's, stone, metal	15-90	1
034	Cut	Cut at base of concrete footing			1
035	Deposit	Fill of cut			1
036	Deposit	Brown soils – mixed lenses with 037 Excavated in two spits 036 and 036b	036: General rubbish. Burned. c. late 19 th to early 20 th C Similar to 032. red brick,	15-1.70	1 and 3

Unit Number	Unit Type	Description	Cultural deposit	Depth below surface (cm)	Area
			ceramic, burned paper, leather, boots heels with nails, copper, bottles (i.e. 'champions vinegar' bottle c. 1880's – 1930's) 036b: General rubbish. Burned. Early 20 th C. Similar to 032. red brick, ceramic, leather, copper, buttons, bone, metal, glass bottles c. 1920's (i.e. 'WAGM 1924', Australian Glass Manufacturers Co. mark 'AGM' c. 1912 – 1922 and Australian Glass Manufactures mark 'AGM' P = Perth c. 1930's)		
037	Deposit	Cream sand with limestone thick towards south thinning to north. Ends with a steep edge running e-w which may be a cut? Mixed with 036	Rubbish deposit. glass, charcoal, metal, bone	15-53	1
038	Deposit	Silty grey deposit subsoil under 027- south end of trench	Coin c 1950s? aluminium, bone, glass		1
039	Deposit	Limestone in south end			1
040	Natural	Yellow sand – Natural	Sterile	30-40	1 and 3
041	Deposit	Mixed soil in base of cut for 028 – modern fill		54	1
042	Cut	Cut for 028		54	1
043	Deposit	Black soil – modern cut and fill			3
044	Deposit	White sands possibly natural – possibly younger than 040??			3
045	Deposit	Grey sandy soil between 040 and 030			3

Historic Timeline (Well):

- 1852 - well sunk at permanent depot site (Fremantle Prison)
- 1870's - well becomes obsolete and is possibly filled in/capped?
- Intrusions/disturbances:
- 1899 - inspection chamber placed nearby approximate location of well

- By 1900's c. - grassed area – turning over of earth. No historical evidence to suggest when or if soil was introduced to support grass.
- 1980 – plans show small structures (garden distribution board and laundry main switchboard) south of well's location. Path leading to structures. Electrical trenches with pipes and cables to service these structures.

Historic Timeline (Metalled Road):

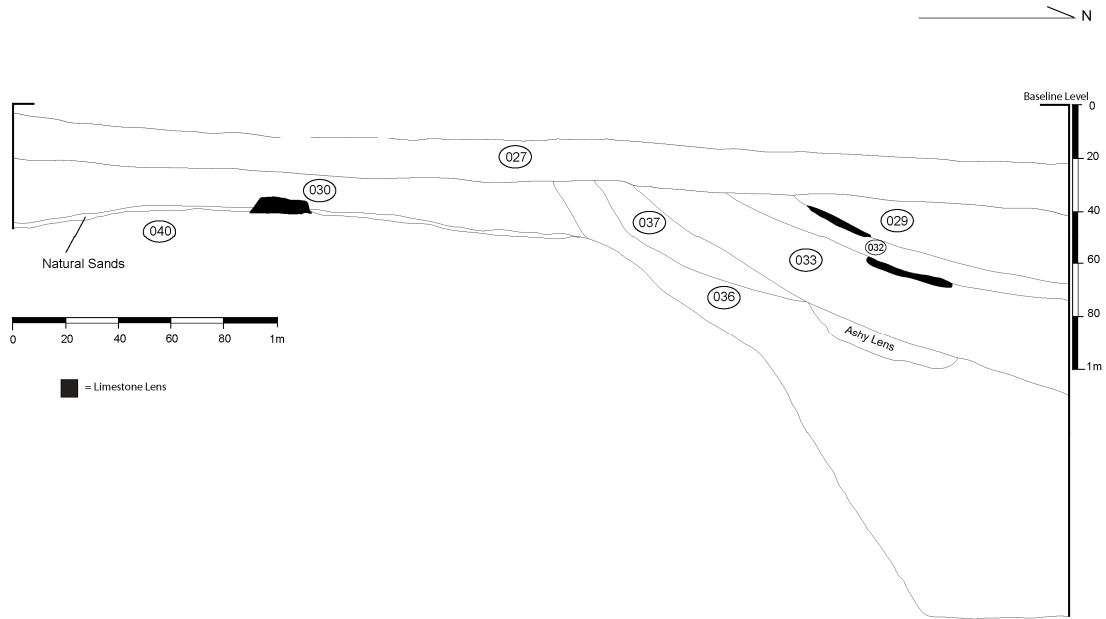
- 1862 – parade ground reformed and road constructed along the front of the prison
- Local limestone rubble from building activity used to 'metal' roads.
- 1909c. – 1935 Photographic evidence places limestone road in similar alignment to present route.
- 1963 – present road bituminised

Historical Timeline (Wooden Division):

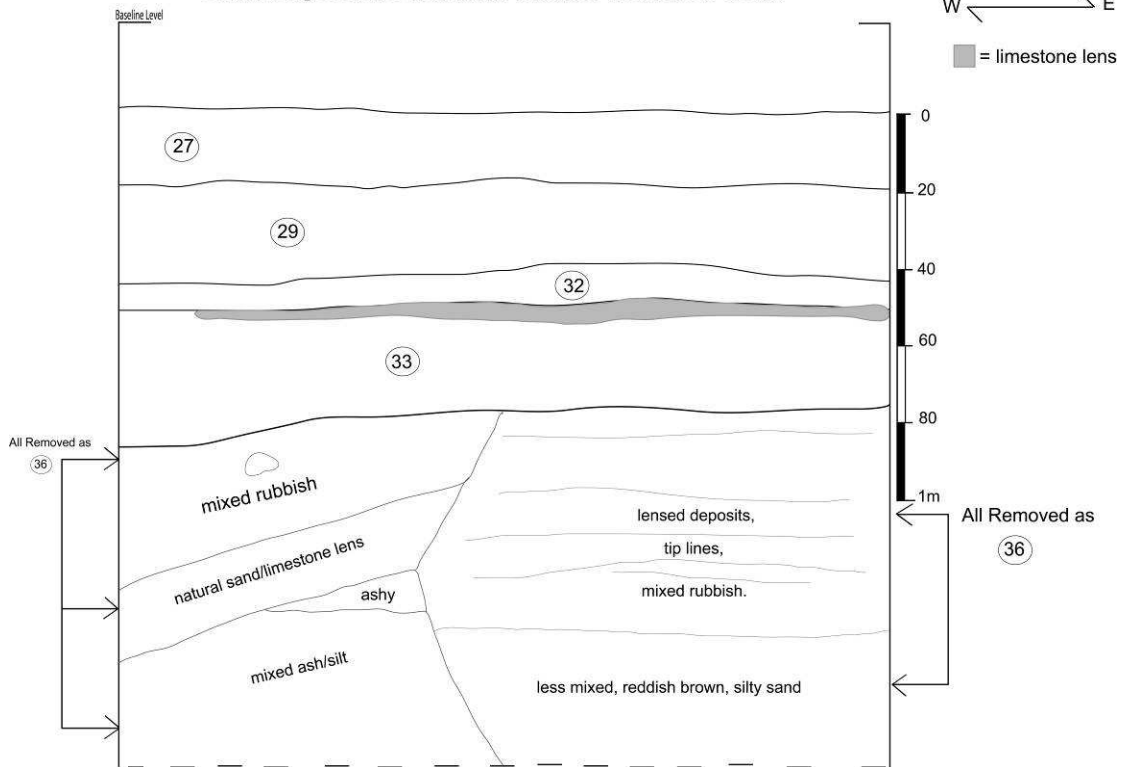
- 1855 – 1856 - installation of wooden division
- Unknown - removal of wooden division
- 1896 – area where wooden division is situated described as 'terraced'. Possibly as part of parade ground development in 1862.
- c.1909 – garden in use on terrace.
- Intrusions/disturbances:
- 1879 – installation of iron pipes leading from reservoir on southern knoll
- c.1920's-1930's – reticulation
- c.1900's – gardening (i.e. turning of the earth)
- No historical evidence to suggest when or if soil was introduced to the terrace to support gardening.

APPENDIX 2: STRATIGRAPHIC SECTIONS: FREMANTLE PRISON PARADE GROUND

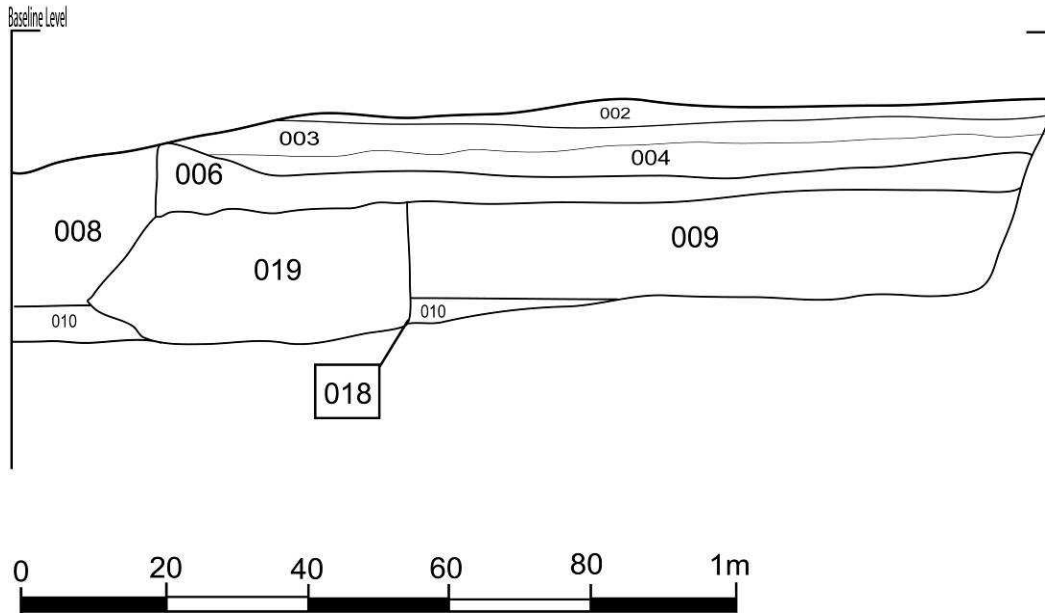
East Facing Section Trench A1, Fremantle Prison Parade Ground



South Facing Section of Trench A1, Fremantle Prison Parade Ground



South Facing Section of Trench A5, Fremantle Prison Parade Ground



East Facing Section of Trench 5A Fremantle Prison Parade Ground

