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## **Conservation Management Plan May 2011**



## **Penitentiary Precinct Port Arthur Historic Site Tasmania**

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1. The Australia ICOMOS Burra Charter
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## EXECUTIVE SUMMARY

- The Penitentiary precinct at the Port Arthur Historic Site is of exceptional heritage value at Local, State, National and International levels (refer to the Statement of Heritage Values in Section 5.2 of this CMP). The Statement of Heritage Values should form the basis for the future planning and management of the precinct.
- The Precinct, which is bound by gravel paths to the north, east and west and the stone retaining wall along Champ St to the south, comprises a rich and complex cultural landscape of natural and human-made topography, below-ground deposits and above-ground structures.
- This CMP was commissioned by PAHSMA (Port Arthur Historic Site Management Authority). The functions and powers of PAHSMA are prescribed in the PAHSMA Act 1987 (the Act can be downloaded from [www.thelaw.tas.gov.au](http://www.thelaw.tas.gov.au) )
- This CMP is a second tier report providing specific conservation and management recommendations for the Penitentiary precinct. The overriding document under which the whole site is managed is the PAHS (Port Arthur Historic Sites) Statutory Management Plan (SMP) (2008) The SMP provides general conservation policy directions for the site and establishes a framework for the completion and integration of subsidiary plans, such as this CMP.
- Following the completion of this CMP, PAHSMA propose to commission a Master Plan for the Penitentiary Precinct. The purpose of this Master Plan will be to provide more detailed direction with issues such as the approaches to site interpretation and treatment of intrusive elements.
- The conservation and management of the Penitentiary precinct at the Port Arthur Historic Site should be carried out in accordance with the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (Burra Charter). A copy of the Burra Charter is attached in Appendix 1.
- Four tiers of significance have been adopted to establish the relative levels of significance of elements of the Penitentiary precinct (refer to Section 5.3 of this CMP). Generally, the level of intervention into the fabric should relate to the level of significance attributed to the element or area of the place. For example, the level of intervention into the fabric should be kept to a minimum for elements considered to be of exceptional significance, though a higher level of intervention may be considered appropriate for elements considered to be intrusive or of limited significance.

- A copy of this CMP, and any updates, should be kept in a permanent and accessible archive for interested parties, and those responsible for the future care and management of the place.
- Specialist advice should be obtained as necessary during the course of any future works from engineers, conservation architects, and other appropriate professionals, to ensure the best possible care and management of the fabric. When undertaking any works to significant building fabric, adopt the approach of changing as much as necessary but as little as possible.
- Retain and conserve building fabric of significance. Consideration may be given to reconstruction and/or interpretative interventions on the site to assist in the understanding of the layers of the cultural landscapes that no longer exist.
- If new development is deemed necessary, the first consideration should be given to areas outside/adjacent to the Penitentiary precinct.
- The significance of the place as a ruin at a tourism destination places limitations on adaptive reuse and there is limited potential for adaptive reuse of the Penitentiary and Bakehouse/Kitchen ruins. However, it is recognised that the reconstruction works undertaken to the Watchman's Quarters provides some potential for adaptive reuse of this component of the precinct.
- An interpretation strategy should be prepared for the precinct. It should be consistent with the interpretation of the site as a whole and should be multi layered to incorporate the various periods of significance of the place. The current interpretation emphasis is on the Penitentiary period (1853-7) and an opportunity exists to reconsider this emphasis and provide greater attention to the original function and later phases of the history of the precinct.
- A risk assessment audit should be undertaken in association with an experienced heritage practitioner to address any deficiencies and should be monitored and reviewed on a regular basis.
- Maintenance is the simplest, least interventionist, least destructive and most inexpensive form of conservation and a regular periodic conditions survey should be undertaken to identify maintenance and conservation requirements.

- The Penitentiary precinct has exceptional archaeological potential and a research framework document should be prepared identifying areas of high research value for future archaeological investigation.
- Existing inventories, indexes and lists relating to the Penitentiary precinct should be collated. Maintain a central inventory and update with material as it becomes available. Ensure all artefacts and collections are appropriately stored in a safe and secure repository.

## 1.0 INTRODUCTION

### 1.1 Background

The aim of this Conservation Management Plan (CMP) is to research and examine the Penitentiary precinct at Port Arthur, Tasmania; to make an assessment of the precinct's cultural heritage significance and to formulate conservation policies and a management plan to ensure the retention, and where appropriate, enhancement of the cultural heritage significance of the place.

This CMP was commissioned by PAHSMA (Port Arthur Historic Site Management Authority) to guide the future management and conservation of the Penitentiary Precinct. The functions and powers of PAHSMA are prescribed in the PAHSMA Act 1987 (the Act can be downloaded from [www.thelaw.tas.gov.au](http://www.thelaw.tas.gov.au) ).

The CMP is a second tier report providing specific conservation and management recommendations for the Penitentiary precinct. The overriding document under which the whole site is managed is the PAHS (Port Arthur Historic Sites) Statutory Management Plan (SMP) (2008) prepared by Godden Mackay Logan Pty Ltd in association with Greg Middleton and Port Arthur Historic Site Management Staff. The SMP provides general conservation policy directions for the site and establishes a framework for the completion and integration of subsidiary plans, such as this CMP.

The CMP will enable informed decisions to be made relating to the future management, interpretation and enhancement of the complex, without compromising the significance of the place.

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This CMP was preceded by two other major projects in the Penitentiary precinct: a 3D Laser Scanning of the Penitentiary structure, completed in April 2008 by SKM, and a Structural Appraisal of the Penitentiary, completed in November 2008 by GHD.

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## 1.2 Method

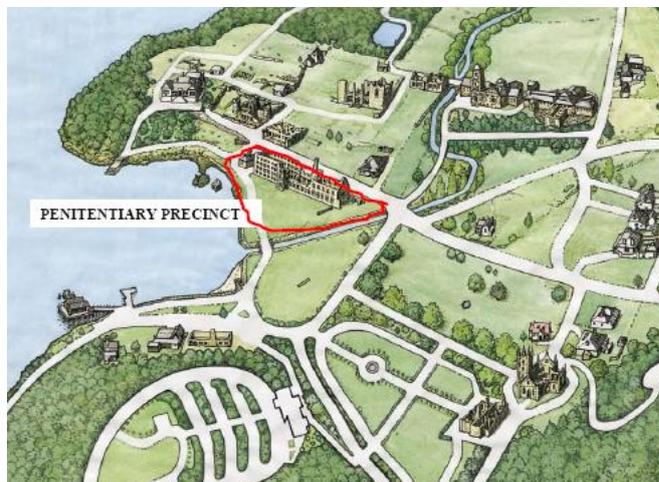
As previously noted, the purpose of this CMP is to make an assessment of the cultural heritage significance of the Penitentiary precinct and its component parts, to undertake an assessment of the integrity of the place, and to prepare conservation policies and a management plan to ensure the retention of significance into the future.

The assessment of the significance of the various component parts of the complex was undertaken with reference to the publication by J.S. Kerr, *The Conservation Plan: A guide to the preparation of conservation of European cultural significance*, Fifth Edition (2000), The National Trust of Australia (NSW).

The CMP was also undertaken in accordance with the definitions, conservation principles, processes and practices outlined in the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (the *Burra Charter*). A copy of the *Burra Charter* is attached in Appendix 1.

## 1.3 The Site

The Penitentiary precinct is located in the heart of the Port Arthur Historic Site, on the edge of Masons Cove. The precinct is defined by the gravel paths to the north, east and west of the penitentiary ruins and the retaining wall to Champ Street on the southern side.



**Figure 1** Port Arthur Site Map  
(Source: PAHSMA)

## **1.4 Heritage Status**

### **1.4.1 World Heritage List**

The Penitentiary precinct, along with the rest of the Port Arthur Historic Site, was inscribed on the World Heritage List on 31 July 2010 as part of the Australian Convict Sites listing. This is a serial listing of eleven representative convict heritage sites across Australia. Within Australia, World Heritage Sites are administered under the *Environment Protection and Biodiversity Conservation Act 1999*.

### **1.4.2 National Heritage List**

The Penitentiary precinct has been included in the National Heritage List as part of Port Arthur since 3 June 2005, as place No. 105718. As such it is administered under the *Environment Protection and Biodiversity Conservation Act 1999*.

### **1.4.3 State Heritage Register**

The Penitentiary precinct was entered into the Tasmanian Heritage Register as part of Port Arthur Historic Site on 10 March 1998, as place No 6. As such it is administered under the *Historic Cultural Heritage Act 1995 (Tasmania)*.

### **1.4.4 Tasman Planning Scheme**

The Port Arthur Historic Site is not covered by a local heritage overlay. However, following the inscription of the Australian Convict Sites on the World Heritage List in July 2010, the *Port Arthur Historic Sites Visual Significance Overlay* (the 'buffer zone') was established around the Port Arthur Historic Site under the Tasman Planning Scheme.

## **2.0 HISTORY**

### **2.1 Context**

#### **2.1.1 *Penal settlements***

The first European settlement on what was then known as Van Diemen's Land (VDL) was created at Risdon Cove, near today's Hobart, in 1803. It was penal in nature, and the island would largely serve this purpose until the 1850s when transportation ended. In all, 73,000 people, primarily men, were transported to VDL. At first the island was part of the colony of New South Wales and most convicts arrived via Port Jackson. Initially, the majority laboured in government work gangs, but as more free settlers arrived, they were increasingly 'assigned' to work for these settlers. In 1818 the assignment system was formalised and convicts were dispatched directly to VDL from England and other British outposts.

By this time, the threat of transportation to Australia was no longer as feared as it once was, due to positive stories filtering back. There was also the problem of how to treat repeat offenders. Lieutenant-Governor William Sorell of VDL requested the creation of secondary punishment stations for recidivists. The request was approved by the Earl of Bathurst in 1821. This coincided with a Commission of Inquiry in 1819-22, which recommended increased punishment and control of convicts and that the poorly behaved ones be sent to outlying penal settlements. Punishment stations were chosen for their geographic isolation and a topography that thwarted escape, such as islands and isthmuses. The first was Port Macquarie in New South Wales, followed in 1822 by Sarah Island and Macquarie Harbour in VDL, Moreton Bay in 1824, and Maria Island, VDL, and Norfolk Island both in 1825. Convicts in the early VDL penal settlements worked primarily in timber-getting, with some shipbuilding, lime-burning, brick-making and farming activities.

#### **2.1.2 *Establishment of Port Arthur***

Port Arthur was founded in September 1830 as a timber-getting penal settlement on the Tasman Peninsula. In 1833 it was designated a site of secondary punishment, and replaced Sarah and Maria islands for this purpose. Though it was not an island, the location was considered ideal as the only overland route was via the narrow Eaglehawk Neck isthmus, which was easy to guard. As a further measure, all non-government sea traffic was banned from the area. Port Arthur was as secure as these isolated islands, richer in natural resources, and more centrally located. The extreme isolation of the two island penal stations had brought with them prohibitive shipping costs. Due to its natural advantages, Port Arthur was soon the largest penal settlement in the colonies, and some 12,000 sentences were served over the 47 years it functioned. Port Arthur had the further advantages of a protected harbour and a freshwater stream.

Lieutenant-Governor George Arthur established the policy that Port Arthur (which was named after him) was to exact 'severe punishment' on 'vicious' convicts as a means both of deterring others and to reform its inmates. Convicts were divided into four classes, which determined the severity of their living and working conditions. They ranged from 1<sup>st</sup> class convicts, sentenced to transportation or imprisonment and hard labour, through to 2<sup>nd</sup> class who were guilty of particularly grievous crimes, and 3<sup>rd</sup> class convicts who had committed further crimes during the voyage over. The most dangerous convicts, 4<sup>th</sup> class, were the so-called gentlemen convicts and political prisoners. They were feared for their revolutionary opinions and education with which to spread these inflammatory ideals. As a consequence, they were kept separate from other convicts insofar as possible.<sup>1</sup>

### **2.1.3 Early development of Port Arthur**

A small area of land was cleared at Mason Cove and the first convicts arrived in 1830. The following year, 300 acres was reserved for the penal settlement, which was then a timber-getting station intended to provide for the needs of VDL. Accordingly, the first inmates were mainly experienced tree-fellers, and sawpits were soon in place on the north side of the cove. Convicts were required to build their own accommodation, in the form of rough log and bark huts. They were located on the south side of the cove, near the freshwater stream (now Radcliffe Creek).

By 1832 these huts were considered inadequate, and in early 1833 new barracks were begun, also of timber. One T-shaped wing that accommodated 475 was completed by the time the new commandant, Charles O'Hara Booth, arrived in March 1833. He submitted a revised plan for the barracks, which appears to have halted further construction for a time. Work began on the redesigned prisoners' barracks in 1835 and they were completed by 1836, located on the south side of Champ Street where the Policeman's Residence is today. The 1835 Prisoners Barracks were enlarged several times. This included the addition of solitary or 'silent' cells in 1838 to isolate and punish the most difficult prisoners. But as the cell doors were opposite each other, these cells did not prevent communication between prisoners as intended. Around this time the terminology used in VDL began to change from 'prisoners' barracks' to 'penitentiary'. Commissariat Officer TJ Lempriere, in referring to the 1835 prisoners' barracks noted that 'as generally called in the colonies, the penitentiary'.<sup>2</sup>

Despite the additions, the Prisoners Barracks were soon considered insufficient, and proposals were made during the 1840s to construct a larger facility that would contain some solitary cells for the 'silent punishment' of difficult prisoners. The Prisoners Barracks were superseded as general accommodation in 1857

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<sup>1</sup> GML, Conservation Plan, 2000, Vol 2, pp 64-67. PAHSMA, Statutory Management Plan (SMP), 2008, pp 20-21.

<sup>2</sup> Brand Papers, Vol 3, pp 361-363.

by the present Penitentiary, but until 1871 served as housing for invalids and lunatics who had been relocated from the Impression Bay Station when it closed in 1851.

Other buildings of the 1830s include those to house the military and their commander, individual dwellings for civilian office-bearers, boat sheds, and facilities required for self-sufficiency. These included blacksmith's shops, a bakehouse, a cookhouse, and workshops on what was then the south bank of the cove adjacent to the outlet of Settlement (Radcliffe) Creek – within today's Penitentiary precinct. A dockyard was developed on the north bank in the second half of the 1830s, and soon became the major industrial complex of VDL.

After it had become the main secondary punishment station in VDL in 1833, Port Arthur's growth was again stimulated by the Probation System introduced in 1840. The new system was introduced following the 1838 inquiry by the Molesworth Committee, a British Parliamentary Committee looking into the shortcomings of the assignment system. Transportation to New South Wales ceased as a consequence, and in VDL all new convicts were placed in work gangs for a defined minimum period. Those who were well behaved were then released on 'probation' and could be hired out to work for a free employer. In the early 1840s new convict stations were opened on the Tasman Peninsula, and many more convicts were funnelled into the area than before, their numbers increasing to 3,500. Port Arthur was given the role as key location for primary and secondary production, and its infrastructure grew accordingly.<sup>3</sup>

Port Arthur became the centre of a convict-powered industrial establishment that covered the entire Tasman Peninsula. From its origins as a timber-getting site, which exported raw timber and provided firewood, shingles and sawn lumber to Hobart, it branched out to other endeavours made possible by its wealth of natural resources and the numbers of skilled convicts available. The penal station soon became self-supporting and a large contributor to VDL's economy. When the Sarah Island shipyards closed with that penal station, the industry was transferred to Port Arthur. Sandstone was quarried nearby, and transported to the wharf via a convict-built and powered railway, bricks were burnt of local clay, shoes were made and flour milled, all for export from the site as well as used locally. Building materials from Port Arthur were used in constructing the buildings we see there today, as well as for government projects throughout VDL.<sup>4</sup>

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<sup>3</sup> Context, Landscape Management Plan (LMP), 2002, pp 23-26. PAHSMA, SMP, 2008, pp 22-23. Scripps, 'The Penitentiary: A report for the Port Arthur Historic Site', 1997, np.

<sup>4</sup> GML, Conservation Plan, 2000, p 76.

## 2.2 Development of the Workshops, Granary and Flour Mill

### 2.2.1 Early waterfront workshops (1831-41)

#### *Establishment of trades at Port Arthur*

Port Arthur was established with timber-getting as its primary industrial aim, and throughout its life the majority of convicts were employed in felling and transporting trees, and sawmilling. In 1834, for example, timber handling activities occupied two out of seven convicts. The others were engaged in improvements to the settlement, ship building and repair in the Dockyard (which operated from 1834-48), and in a variety of trades centred at the western end of what is now called the Penitentiary Precinct. (During the 1830s and '40s, of course, the penitentiary buildings housing the convicts were located elsewhere on site.)

In contrast, at the time there was little primary production at the settlement. Cultivation of grain and livestock was avoided as it was feared that absconding convicts could stockpile food for their journey (or take a cow with them), though vegetables were grown at Safety Cove. The rest of the rations were imported from elsewhere in VDL.

Convicts who arrived with desirable skills, such as shoemaking or ironmongery, would find their tasks much lighter than those who laboured in the carrying gangs – transporting massive logs to the sawpits, and from the sawpits to the settlement – or those who cut the logs by hand. While all new convict arrivals to Port Arthur were supposed to spend time in the timber carrying gangs upon their arrival, in reality, the demand for skilled labour meant that those with a useful trade often bypassed this step. In addition, some convicts (mostly boys from Point Puer) were trained in a trade, adding to the settlement's industrial potential and the individual convicts' self-sufficiency upon release.<sup>5</sup>

The first manufacturing trades practised at Port Arthur were those required for building a new settlement and providing equipment for the timber trade, namely, carpenters, coopers, plasterers and wheelwrights.

Shoemaking became a particularly successful industry at Port Arthur, and the first to manufacture consumer goods for export from the penal settlement. One shoemaker arrived in 1830 with the first group of convicts sent to Port Arthur, and the first shoemaker's shop was built by August 1831. In 1832, a group of shoemakers were sent there to form a shoemaking gang. Prior to this, the men had been working in the road and bridge gangs, but producing black market goods on the side. In order to regularise this activity, Inspector Roderic O'Connor recommended that they be sent to Port Arthur to produce shoes for the benefit of the Convict Department. As there had been complaints about the

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<sup>5</sup> Denholm, 'The Administration of Port Arthur Penal Settlement, 1830-1844', 1968, pp 138, 142,147. Scripps, 'Interpretation Storyline. Precinct 1', 1997, p 15.

quality of shoes sent from England since the 1820s, this idea was taken up.<sup>6</sup> In 1832, 400 pairs of shoes and boots were exported from Port Arthur (above and beyond the shoes that would have been gone to resident convicts and officers),

This initial gang was shortly reinforced by an experienced team of shoemakers from Maria Island, upon its closure. The 12 shoemakers had been producing some 1,700 pairs per annum. Their arrival gave a jump-start to this fledgling industry at Port Arthur and allowed exports to grow exponentially. By 1841 there was a high of 52 shoemakers at work.

The first Superintendent of Shoemakers, free settler James Sly, was appointed in June 1833. Among his duties was training boys in the trade and cutting the shoe leather – in his own quarters to prevent theft. The convict shoemakers still managed to secret away scraps of leather and make shoes for private sale when the superintendant was away cutting leather.

By 1835, shoe exports had risen to over 5,000 new pairs of shoes and boots, and another 5,500 pairs reconditioned. In this year Lieutenant-Governor Arthur commented that the shoes were superior in quality to those imported from England, apart from turning a profit for the Convict Department.

The metal trades were the second of the two largest exporters of consumer goods from Port Arthur. Blacksmiths worked at the settlement from the earliest days, initially for local purposes. A visitor to the smithy in 1837 found it to be ‘a hive of activity’ with experienced blacksmiths and young apprentices from Point Puer absorbed in their work. The blacksmiths made and fitted leg irons to convicts, as well as manufacturing consumer goods. A list of goods produced in 1841 ranges from kettles, lamps and candlesticks, to ink stands, as well as repairs of pots, pans, lamps and lanterns.

Another skilled team brought from Maria Island in 1832 were the cloth-makers and tailors. They had been producing about 100 yards of cloth a week, and producing 300 suits of convict clothing a year. The workshop buildings were expanded around 1834 to include a tailoring shop. There they produced two jackets, two pairs of trousers, two cotton shirts, one cloth waistcoat and one cap per convict per year, as well as their bedding. The enlarged workshops complex of c1834 also housed other trades that produced primarily for the needs of the settlement: carpenters, coopers, wood tuners, and nailers.<sup>7</sup>

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<sup>6</sup> Martin, ‘Shoemaking and Reform agendas at Port Arthur penal station’, 2006, pp 34.

<sup>7</sup> Denholm, ‘Administration of Port Arthur’, 1968, pp 150-153. Scripps, ‘Interpretation Storyline. Precinct 1’, 1997, pp 17-18, 21-22. PAHSMA, ‘Penitentiary Workshops Archaeological Site Report’, nd, pp 32-33.

### *Workshops in the Penitentiary precinct*

Workshops were some of the first structures to be erected in Port Arthur's development. They are first mentioned in 1831 and two workshop buildings are shown on an 1833 map on the south side of the cove, where Settlement (now Radcliffe) Creek originally had its outlet (prior to the reclamation of this part of the cove).

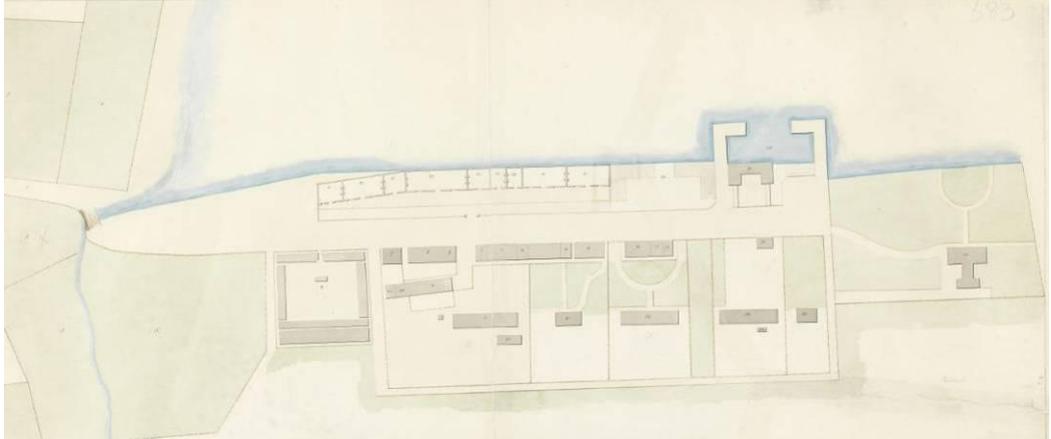


**Figure 2.** Detail from J.W. Hughes 1833, 'The Settlement of Port Arthur' showing the Shoemakers' and Blacksmiths' Shops erected in 1831 on the south side of the cove. Note that they are located on the edge of a sandy area submerged at high tide, which was later reclaimed. (PAHSMA ref. HM 1833/1)

The larger of the two was for carpenters and shoemakers, and the second a blacksmith's shop. The presence of the workshops indicates that the authorities intended Port Arthur to be a working penal station, earning from the labours of the timber-getters and the semi-skilled shoemakers whose goods were shipped to Hobart from a wharf built at the same time. The growth of the settlement in the mid-1830s led to the expansion of the workshop complex on the same location, to take advantage of an expanding skills base. The buildings were reported to be in a 'dilapidated state' in 1834, with instructions to design new ones, also weatherboard huts.<sup>8</sup> However, comparison of the 1833 plan showing the workshop with an 1836 map, shows a similar dog-leg form, though archaeological evidence indicates that entirely new buildings were constructed

<sup>8</sup> Brand Papers, Vol 4, pp 347, 349.

c1835 (not refurbishment of the existing ones). The 1836 map shows a carpenters' shop, coopers' shop, wood turners' shop, tailors' shop, shoemakers' shop, nail-makers' shop, and blacksmiths' shop (containing two double forges, three nailers forges and metalwork benches) in the long workshop building constructed partially on log-crib landfill at the edge of the cove.<sup>9</sup>



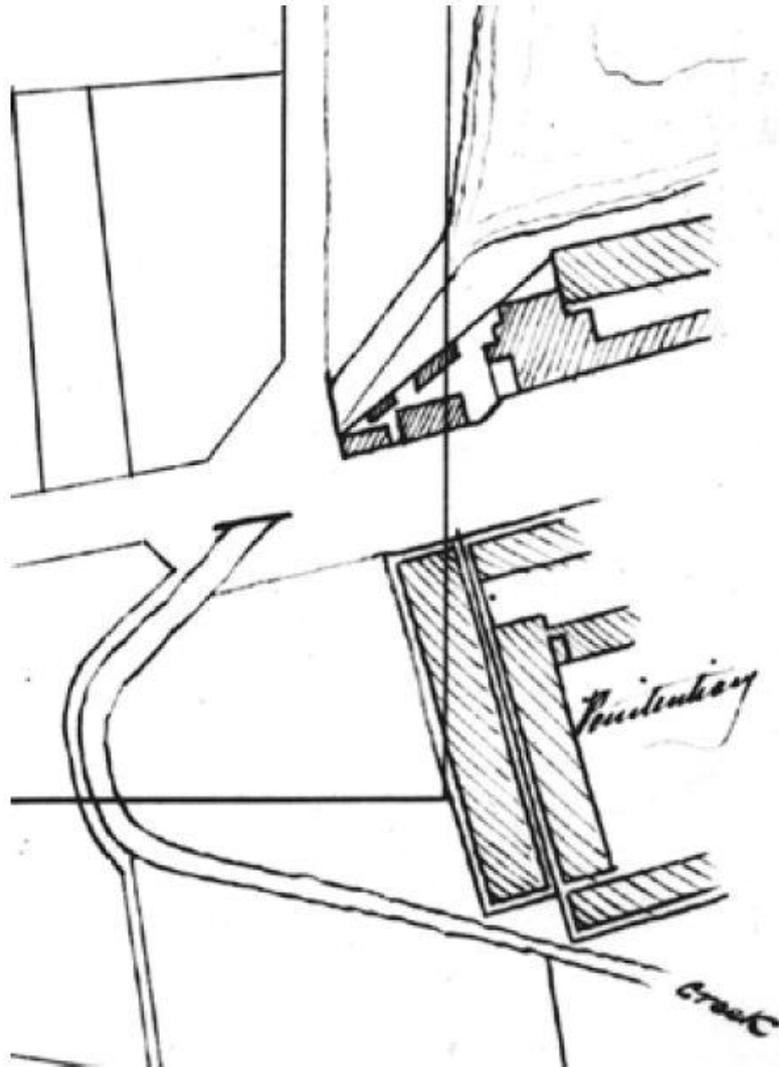
**Figure 3.** Detail of 1836, 'Plan of Settlement: Port Arthur', 1950s tracing. The workshops in the long, narrow building located along the water's edge are, from right to left: Invalid Room, Carpenters' Shop, Coopers' Shop, Wood Turners' Shop, Tailors' Shop, Shoemakers' Shop, Nailers' Shop, Blacksmiths' Shop, and Store room for iron. (PAHSMA ref. HM 290/1459)

The shoemakers' shop was located at the centre of the complex. It was a weatherboard building with two cutting-out rooms, each lit by a single skylight, and a large shoemaking room, lit by 12 skylights. There were no windows on the walls and a raised platform inside for the overseer. The shop was enlarged by 1846, along with the number of shoemakers to 54. In 1847 they were producing 250 pairs of shoes and boots a week, many being shipped to Hobart Town for sale.

Several new buildings were added behind and just west of the long workshop building by 1841. These may have been a constable's hut and lumber stores.<sup>10</sup> The Chief Constable's Quarters, erected by 1836 at the western end of the Workshop Complex, comprised a small weatherboard cottage and a detached office. The yard behind them was a large outbuilding and a privy. By c1870 the buildings were occupied by overseers.<sup>11</sup> The large building with an irregular footprint shown south-west of the end of the line of workshops may have been the new masonry building which housed an enlarged smithy and forge. It was

<sup>9</sup> PAHSMA, 'Penitentiary Workshops Archaeological Site Report' nd, pp 36, 31.  
<sup>10</sup> Brand Papers, Vol 4, p 219. PAHSMA, 'Penitentiary Workshops and Ablutions: Historical Analysis', 2003.  
<sup>11</sup> Brand Papers, Vol 2, p 89.

constructed on solid ground, partially cut into the earth bank behind. It housed two double forges, three nailers forges and metalwork benches.<sup>12</sup>



**Figure 4.** Detail of c.1841, 'Sketch of Site for the Proposed new Penitentiary of Port Arthur'. Commandant Booth's proposal for a new penitentiary building (not built). Shows the western end of the workshops complex. A cluster of huts are visible at the west end, as is a new building behind the 1836 workshops. (PAHSMA ref. HM vol.78/1-4)

### 2.2.2 Granary & Flour Mill (1842-5)

The first proposal for a flour mill at Port Arthur was made in 1839 by Deputy Assistant Commissariat General Peter Roberts with the goal of reducing shipping risks and to rationalise the production, storage and supply of grain in VDL. At the time, Port Arthur seemed a logical place to construct such a facility

<sup>12</sup> PAHSMA, 'Penitentiary Workshops Archaeological Site Report' nd, p 31.

on a grand scale. Most grain was grown in the Midlands of VDL and was transported via a dangerous open sea route to Hobart. It was ground there and then re-shipped to the penal stations; in the process often adulterated by dishonest millers. Locating a large grain store and mill on the Tasman Peninsula would prevent both problems. Double-handling would be avoided, thus lowering the likelihood of tampering with the flour, and costs reduced by removing one step in the supply chain. And the growers in the Midlands, around Pittwater, could ship their wheat to the man-powered railroad on the Tasman Peninsula which led to Port Arthur, thus avoiding open water. It was expected that centralising grain storage and flour milling at Port Arthur would save over £1,500 a year in transport costs, and would place control over much of the process into the hands of the Convict Department.

Such economies became particularly important after the 1838-9 agricultural season. There had been several poor harvests in New South Wales prior, and VDL farmers stepped into the breach, trebling their exports. The increased demand meant that the Commissariat could no longer dictate the prices they paid, as the price for a bushel of wheat jumped from £7 to £10 in Hobart and Launceston. The rate of exports was so great that the Commissariat even began to have difficulties procuring enough flour for the convicts, with a decrease in the daily ration from 1.55 lbs each in 1838 to 1.44 lbs in 1839-41.

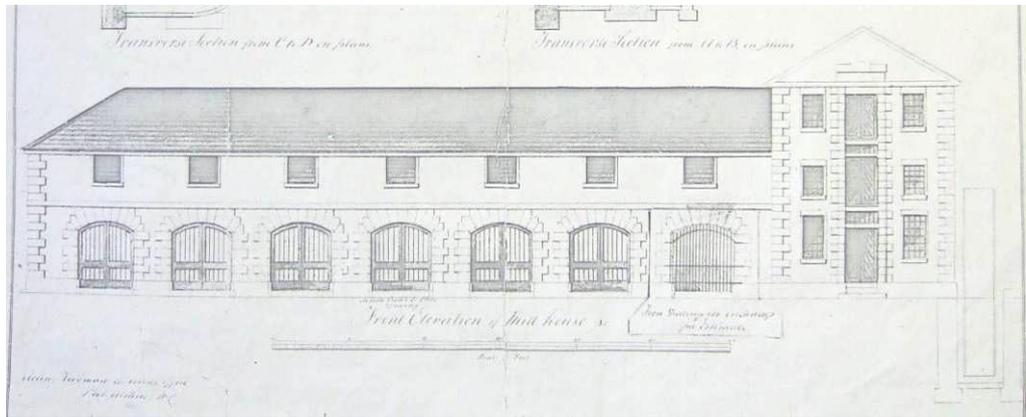
Considering the jump in production, there was also a shortfall in grain storage facilities. Granaries in Hobart could hold up to 21,000 bushels (just over half the annual consumption of Hobart, Launceston and Port Arthur), and there were proposals to convert the Hobart Ordnance Store and Customs House for this purpose. Instead, a large granary – to store 40,000 to 50,000 bushels – was proposed for Port Arthur, in line with the desire to centralise and rationalise storage and milling. Once the Commissariat could stockpile grain to this extent, they would again have more control over prices and be able to ride out shortfalls in the market.

One final reason such an ambitious construction and engineering project was carried out in Port Arthur and not, say, Hobart, was linked to the availability of labour. Since mid-1839, with the introduction of the probation system, newly arrived convicts were sent to work in gangs on the penal stations. Their labour could be purchased for outside projects, but only at high, government-determined probationary rates. This labour shortage was exacerbated by VDL's economic boom in 1839-40, so the rates for work by free settlers skyrocketed. Thus the least expensive way of carrying out large infrastructure projects was at a penal station, where convicts could be 'paid' solely in room and board plus extra incentives.

The idea of a large mill and granary at Port Arthur was supported by the commandant, Charles O'Hara Booth. He suggested a site at the edge of Mason Cove near the outlet of Settlement Creek, which he thought would provide a sufficient supply of water to power the mill throughout the year. The site would also allow ships to unload grain and load flour directly from the Granary.

Acting Foreman of Works at Port Arthur, Mr Cart, questioned whether there would be enough water in the summer to power the mill for twelve hours a day. Either Cart or Booth put forward the idea of powering the grinding stones by treadwheel during the dry months.

The treadwheel, or treadmill, was introduced as a form of punitive labour in England in 1817. It was initially seen as a way of punishing prisoners who were otherwise idle, and was so popular that by 1824 it was used in 54 English prisons. At first it was used purely as a punishment, but later the work of the prisoners on the treadwheel was employed gainfully to grind grain or pump water. The treadwheel itself is a large hollow drum which turns on an axle. There are steps around the outside ascended by a team of prisoners in a row, thereby turning the wheel. This form of punishment was rapidly adopted in the colonies as well. A treadwheel powering a grain mill was constructed in 1823 at Carters' Barracks, Sydney. And by 1828 another was operational at the Hobart Prisoners Barracks.



**Figure 5.** Detail of Henry Laing's c1841 plan for a combined granary (left) and mill (right). Note the external waterwheel on the right side of the mill. (PAHSMA ref. HT-290/1483)

Major Kelsall of the Royal Engineers protested against grinding wheat by convict labour, to no avail. The Executive Council approved the concept in November 1839, and instructed Kelsall to prepare specification and cost estimates so the project could be formally authorised. Kelsall engaged the convict architect and Surveyor of Walls Henry Laing to prepare drawings of a mill with waterwheel and treadwheel attached to a granary. It seems that Laing prepared two concepts for the mill and granary, the plans of which survive. One was for separate mill and granary structures, and the other for a combined building (pictured above). In June 1841, plans for the mill and granary were approved by the Lieutenant Governor, presumably drawn by Laing.

While Laing's design was for a long, two-storey structure with a raised (three-storey) section at the end adjacent to an external waterwheel, his plans were altered by the time construction began three years later. The overall height of

the building was raised to four-storeys, and the water wheel was inserted into its centre. The fenestration of the two designs also differed: Laing's mill had a row of double timber doors with segmentally arched heads along the ground floor, with small square windows above. The arched openings and building corners were articulated with stone voussoirs<sup>13</sup> and quoins, and the roof was hipped. The Granary and Flour Mill, as realised, had only windows on the ground and upper floors of the north elevation, and the articulation of openings with quoins was more restrained. There were further changes to this design as the works progressed, discussed below.

Construction had been delayed prior to this as all manpower resources at Port Arthur had been devoted to construction of the boys' camp at Point Puer and on the Military Barracks. By 1841 the issue had become pressing with the introduction of the Probation System and subsequent jump in population and mouths to feed on the Tasman Peninsula. Previously, the responsibility to feed most convicts had fallen upon the free settlers to whom they were assigned. Now, with the introduction of probationary stations, the government was required to supply huge amounts of flour and other foodstuffs to stations on the Tasman Peninsula, up to 2,385 kilograms a day by 1842.<sup>14</sup>

The second prong in the Convict Department's attempt to increase wheat supplies and avoid spikes in the market was the establishment of new probation stations on the Tasman Peninsula 'primarily for the purpose of wheat growing'. These were the Saltwater Bay Probation Station, opened in 1841, and the Impression Bay Probation Station, of 1842. Like the Flour Mill and Granary at Port Arthur, however, both of these agricultural ventures were expensive failures.<sup>15</sup>

### **2.2.3 Henry Laing (1803-1842?)**

Henry Laing was responsible for preparing early drawings for a flour mill and granary at Port Arthur around 1841. The resultant building, however, differed substantially from his plans.

Henry Laing was an architect and surveyor from England. He was convicted of larceny in 1829 and transported to VDL. Once there, his skills were quickly put to good use, though he was sent to Port Arthur for misdemeanours several times. In 1837 he was appointed a constable for good conduct and useful service, and during his next four years on the Tasman Peninsula he designed numerous buildings at Port Arthur, Point Puer and Eaglehawk Neck. The Gothick Church at Port Arthur, for example, is attributed to him. Laing's work

<sup>13</sup> Voussoir: one of the wedge-shaped stones forming the curved parts of an arch or vaulted ceiling.

<sup>14</sup> Tierney, 'Notes on Port Arthur's tread wheel', 2009. Tuffin, 'A Monument to Folly?' in *Tasmanian Historical Studies*, 2004, pp 124-138. Brand Papers, Vol 1, pp 234-239.

<sup>15</sup> Denholm, 'The Administration of Port Arthur Penal Settlement, 1830-1844', 1968, p 139.

was characterised by meticulous care and attention to detail, as well as often being ambitious in scale. In late 1840, after completing the first plans for the Port Arthur Granary and Flour Mill, Laing was appointed supervisor at the coal mines. In 1841 he prepared sketches of potential locations for new penal stations. He received his ticket-of-leave in May 1842, after which there are no further records of him in VDL.<sup>16</sup>

#### **2.2.4 Construction of the Granary and Flour Mill**

At the end of 1842 Major Victor had taken over from Major Kelsall as the Commanding Royal Engineer. He was instructed to move ahead with construction at Port Arthur as a matter of urgency. After visiting the site, he confirmed in December that the Royal Engineers did not have a millwright competent to supervise the works, and indicated that free settler Alexander Clark would be suitable for this position.

Upon his arrival in January 1843, Clark was put in charge of a team of convicts, some of them skilled tradesmen. In his correspondence, Clark frequently complained that he did not have enough skilled millwrights, carpenters and masons, and that those he did have were frequently locked up as punishment for minor infractions such as drunkenness. On occasion Clark performed manual labour himself when short of workmen, for example in June 1844 when his entire workforce was locked up after tobacco was stolen from the Commissariat Store.

On 4 February 1843, the men began laying the foundations on the site of the timber wharf. It also seems that landfill was extended into the bay at the same time. Fieldstone boulders (called 'ironstone' at the time) and coarsely split rubble were laid as foundations up to the surface of the landfill, with sandstone foundations carried 1 foot above that. The walls were constructed of red brick, burnt on site from local clays. The brick was accented by quoins at the corners of the building, on either side of the water wheel, and around windows and doors, hewn from the local sandstone. The hipped roof was covered in timber shingles, split on site by convicts.<sup>17</sup>

Investigations in the 1970s found these bricks to be generally underfired (at temperatures of 850°C or less, instead of the standard 1050°C) and consequently quite porous. They also have a high salt content which may result, in part, from the use of seawater in puddling the clay, and from use of beach sand in the mortar. The clay for these bricks was likely to have come from the clay field at Opossum Bay. This site, about a mile from the settlement, was opened around 1832 and by October 1833 produced over 100,000 bricks a

<sup>16</sup> McMahon, 'Laing, Henry (1803 - 1842?)', *ADB*, Vol 2, 1967, p 71.

<sup>17</sup> Brand Papers, Vol 1, pp 239-240. PAHSMA, 'Penitentiary Workshops Archaeological Site Report', nd, p 32.

month. By 1836, pan tiles, garden tiles and fire bricks were also under production. The Opossum Bay brick fields were open until the 1840s<sup>18</sup>

While both versions of the c1841 plans by Laing called for a linear building, the Granary (or Store) was constructed in an L-shaped plan, with a return at the south-east end. Clark noted in a letter to the Commanding Royal Engineer on 25 March 1843, this alteration in the plans was necessary to move the bulk of the building eastward so as to avoid unstable ground at the west end of the site. The adjacent Flour Mill had three millstones powered by a waterwheel and the treadwheel, as well as flour dressing machinery. The millstones, mill shafts, pinion wheels, and cast brass and iron cast parts were all from England, apart from the treadwheel shaft which was cast in Hobart. The 35-foot diameter overshot<sup>19</sup> waterwheel was suspended between a gap between the Granary and Mill house buildings. This gap was spanned by a common hip roof to the two buildings. The combined Granary and Mill were described in 1854 as the 'largest edifice in the colony'.<sup>20</sup>

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<sup>18</sup> Crawford, de Bavay & Cripps, 'Report on the Conservation of Building Fabric and Restoration of the Penitentiary at Port Arthur', Sept. 1974. Brand Papers, Vol 2, pp 47, 52. Brand notes that the second clay fields at Port Arthur (on Brickfields Hill) was opened by 1846 or as early as 1842. Considering the distinct difference in clay colours between the bricks used to construct the Granary and Flour Mill 1843-45 (red) and those used in the construction of the Bakehouse and Penitentiary conversion in 1853-57 (cream), it is highly likely that the clay came from two distinct locations. This evidence argues that the Opossum Hill clay field was closed only after 1845, when the Granary and Mill were finished.

<sup>19</sup> With an overshot wheel, the flume outlet is at the top of the waterwheel. For this reason, it is the volume (mass) of the water responsible for turning the wheel, not its speed.

<sup>20</sup> Jackman, 'Penitentiary/Flour Mill Archaeological Interpretation – Preliminary Notes', 2009. Brand Papers, Vol 1, p 240.



**Figure 6.** Detail of 'Plan of the Penal Settlement at Port Arthur', 1846, showing the reservoir (centre) and the path of the aqueduct down to the Flour Mill. (PASHMA ref HM 1846/1)

Clark was also in charge of supervising construction of the necessary infrastructure to power the Flour Mill. Work on the project commenced in the final quarter of 1842. When Clark arrived in January 1843, the weir had already been started, and part of the mill-race cut into the hillside. It led from a clay-lined catchment dam (or reservoir), 3m high by 30m long, located just over 1.6 kilometres away over uneven terrain, to the south of the Hospital Wash House.

The water came from Settlement (now Radcliffe) Creek. As the creek had a very gentle fall as it approached the Flour Mill, part of its flow was diverted further upstream (and uphill) by a small weir through a headgate and into an unlined headrace. This led to a catchment dam at the peak of Settlement Hill. The water was released through a stone sluice-gate, and then ran down the hill with a 15 metre drop, providing it with enough fall-power to turn the waterwheel.

Its descent was complicated by buildings and Champ Street in its path, requiring part of it to be put underground, with the added time and expense this

entailed. In addition, its length allowed water loss via seepage and evaporation. The open channel ran down the hill to a point north of the Hospital, and then transferred to an underground brick-lined aqueduct about 90 metres long. The brick aqueduct took eight months to construct in 1844. After the aqueduct, the water continued underground in cast-iron piping.

Late in the proceedings, well after the completion of the mill house and waterwheel in November 1843, the design of the final section of the millrace was decided. In February 1843, Clark proposed continuing the water pipe under Champ Street, and to then raise the water in a pipe (with a siphon) up to a flume leading to the top of the waterwheel. This was altered in February 1844 to the plan as finally executed: the water would be raised to the south of Champ Street, crossing above the buildings on its south side and the street itself in a trough, and then continuing over the mill yard. The flume-trough was supported on three stone pillars. The base of two pillars survive: one is part of the retaining wall just south of Champ Street (within the Penitentiary precinct), and the other is just north of Champ Street. While pictorial and physical evidence points to a rise in the piping on the north side of Champ Street, an essay on 'Water Reticulation at Port Arthur' notes that there are also documentary sources that indicate that there was a rise on the south side instead.



**Figure 7.** Detail from John S Prout's sketch 'The settlement, Port Arthur, V.D.L., from the commandant's residence, May 20, 1845', showing (from left to right) the siphon rising up south of Champ Street, and two support pillars (on either side of Champ Street) supporting the flume which then enters the Flour Mill at eaves level. (National Library of Australia, nla.pic-an2479033)



**Figure 8.** Left: Base of the flume pillar in the Champ Street retaining wall enclosing the rear wall of the Penitentiary (Andronas Conservation Architecture, 2010).

The water from the flume hit the top of the waterwheel, where it could provide maximum power. The water exiting the wheel on the north side of the building into Mason Cove, though some of it was directed to a water storage tank used to supply ships with fresh water. According to Tuffin (2004), the underground aqueduct and piping, as well as the flume over Champ Street, were unusual technical solutions for their day. While there were minor examples of overhead water troughs in New South Wales, there is no known colonial equivalent of the 90 metres of underground aqueduct and piping to power a mill.

The building and associated infrastructure reached a degree of completion by 3 March 1845 to allow a trial run grinding wheat powered by convicts on the treadwheel. Clark was happy to report that the mechanical operations that day evoked 'universal admiration' from the witnesses. The convicts also commented that the Port Arthur tread mill was much steadier in operation than the Hobart one. The waterwheel was not yet in operation by this time, as the water supply had not been hooked up. Due to ongoing frustrations with his workforce, and personality conflicts with the Port Arthur authorities, Clark concluded his work there on 30 June 1845, even though the Mill was not fully operational.<sup>21</sup>

### **2.2.5 Alexander Clark (1809-1894)**

Alexander Clark was born in 1809 in Kinghorn, Scotland, the youngest son of Andrew and Agnes (nee Peers) Clark. Young Alex was given a sound education and then worked for his father, a stocking maker, for several years. He then served as an apprentice to Alexander Russell, the owner and operator of the Kirkaldy Foundry and Engineering Works. There he became experienced in iron

<sup>21</sup> Brand Papers, Vol 1, pp 242; Vol 3, p 218; Vol 4, p 43. Tuffin, 'A Monument to Folly?', 2004. GML, Conservation Plan, 2000, Vol 2, site card for Reservoir. PAHSMA [Richard Tuffin?], 'Water Reticulation at Port Arthur', nd, pp 7-8, 10-11.

foundry, windmills, watermills and steam engines and their use in agriculture and manufacturing.

Alex Clark married Ann Inglis and shortly after, in 1832, the young couple, Alex's parents and other family members emigrated as free settlers to Hobart Town.

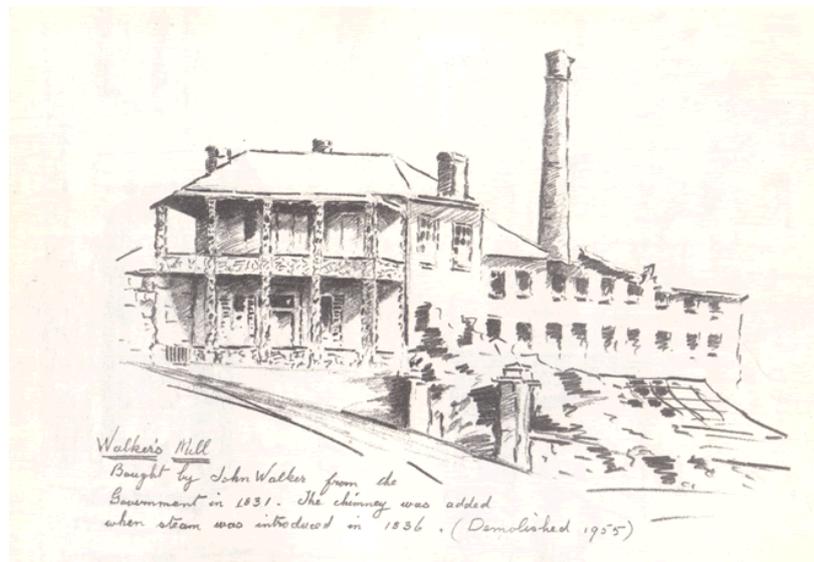


**Figure 9.** *Portrait of Alexander Clark, taken in Hobart, nd. (University of Tasmania website, Clark Family Tree)*

McLaren (2003) speculates that Alex Clark was the primary influence behind the move, as Robert Russell, the brother of his former employer and another engineer, has just settled in VDL. Hobart Town offered good opportunities for engineers in the early 1830s and a number of other Scottish engineers also emigrated to VDL in 1832.

In VDL, Alex Clark was first employed with Hobart builders, Jackson and Addison. He then joined John Walker in 1836 as a millwright and engineer at the Steam Engine and Government Mill, and was responsible for moving the company's steam engine and building a new chimney stack for it.

In 1838 he formed a loose partnership with engineer Henry Davidson, as an iron founder, engineer and machinery importer, and the two erected steam-powered engines in many locations around VDL, including engines for pumping water from the government Coal Mines on the Tasman Peninsula in 1841. Clark's reputation spread thanks to his work at the Coal Mines and in Hobart, and in November 1842 Commanding Royal Engineer, Major Kelsall, wrote, encouraging him to tender for the work supervising the construction of the Granary and Flour Mill as well as supplying the machinery for the water wheel.



**Figure 10.** Walker's Mill, where Alexander Clark installed steam power in 1836 (demolished 1955). (University of Tasmania website, Clark Family Tree)

McLaren (2003) notes that Clark's correspondence with the Royal Engineers over the course of the project: 'reveals the breadth of Clark's engineering knowledge, his attention to detail, practical expertise and ability to organise a large and complex undertaking, as well as his directness, honesty, confidence in his own ability, impatience with bureaucratic interference and uninformed criticism, readiness to acknowledge support, sensitivity to the aesthetic aspects of his work, and his somewhat sardonic wit.' They also illustrate his humane attitude toward the convicts who worked for him on the building site.

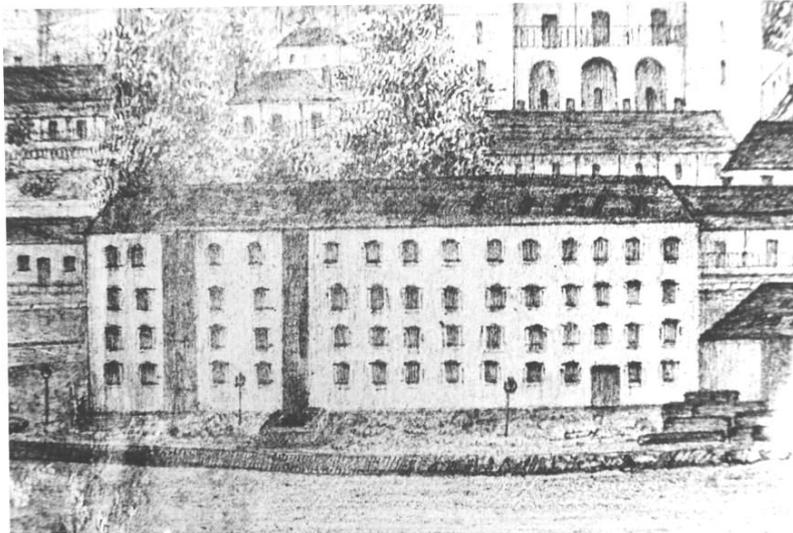
After superintending construction at Port Arthur, Clark went to Launceston in 1846 to oversee construction of a water wheel for the waterworks. Clark retired in 1870 at which time his sons took over his engineering and sawmilling business.<sup>22</sup>

### 2.2.6 Description of the Granary and Flour Mill

Upon completion, the Granary and Flour Mill were a 60-metre-long, 15-bay plus waterwheel, composite building of four storeys. Their visually integrated form was thanks to the exertions of Alexander Clark, who battled with the Commanding Royal Engineer to have the entire structure of a single height, instead of a lower treadwheel ward at the west end. Clark argued that it would be 'a pity, that such a noble edifice, should thus be defaced'. The problem was solved when Port Arthur's priest and Commandant Boyd decided that a Catholic

<sup>22</sup> McLaren, 'Clark, Alexander Russell (1809 - 1894)', *ADB*, Vol 1, 1966, p 224.  
 McLaren, 'Clark family background', 2003  
<http://www.utas.edu.au/clark/familytree.html>, accessed 02/11/2010.

chapel could be located in the space above the treadwheel, providing a practical reason to raise its roof height.<sup>23</sup>



**Figure 11.** Detail sketch of the Granary and Mill, c1851-52, after the watercolour by Benjamin Duterrau.. Note the vertical loading bays to the Granary on the left side and the waterwheel protruding from the Mill building to their right. The treadwheel ward was on the right end. (PAHSMA ref 1369)

The Granary was the L-shaped building of five bays on the east side, which comprised about a third of the north elevation. It was separated from the waterwheel well and the rest of the Flour Mill by an internal brick wall at its eastern end. A timber-shingle clad hipped roof breached the gap over the water wheel and gave these two independent structures a visual unity. The external walls were constructed primarily of red brick. Early records describe it as a “yellow building” of “ochre colour”. In light of the remnant limewash layers still visible on the external walls, it is likely that the bricks were washed from quite early in the building’s life both to protect the underfired bricks from the elements, and to emulate the colour of the more prestigious sandstone dressings seen as quoins and around openings. The unusual stone gutters, which are cut into the parapet stones at the top of the walls, were a point of contention between Clark and Superintendent William Cart, who remarked that the gutter would shrink in dry weather.<sup>24</sup> This may have referred to a lining or other waterproofing material inside the stone gutters.

Inside the eastern building, the Granary, there were four storeys in the southern arm. In the northern section there may have been only three storeys, with a large open gallery between the first and third floors. It was lit, in part, by skylights. There was a full-height loading bay, outlined with quoins, at the centre

<sup>23</sup> Brand Papers, Vol 1, p 242.

<sup>24</sup> Crawford, de Bavay & Cripps, ‘Report on the Conservation...’, Sept 1974. Scripps, ‘The Penitentiary’, 1997.

of the north elevation of the Granary. Set into this opening would have been timber doors at each of the floor levels.<sup>25</sup> Offices were created in the two uppermost stories of the Granary by 1847. They were reached via a bridge from Champ Street, and included the Superintendent's Office, the Commandant's Office, waiting rooms, water closets of some kind, police offices, and several cells.<sup>26</sup>

The western arm was the Flour Mill, divided into the mill house and the treadwheel ward. The mill house adjoined the water wheel, and had three storeys. The attic level may have been linked by a gantry to the upper level of the Granary building. Physical evidence indicates that the waterwheel axle was at second-floor level, which would explain why there was no second floor in the mill house, as it was taken up by the waterwheel shaft and gearing. The axle would have been supported by a frame structure, which may have been brick. There were three mill stones, two powered by water, and the third by the convicts. There were also two machines for dressing (sieving) the flour.

The mill house and treadmill ward were separated by a non-structural partition wall, which was not keyed into the exterior walls. There were at least two doorways into the treadwheel ward, one on the ground floor in the north-west corner (into what is now the Bakehouse), and one in the west end wall at the first floor level which may have given access to the top of the treadwheel via external stairs.<sup>27</sup> There was also a door each on the north and south elevations at ground floor level.<sup>28</sup> The ground-floor ceiling height was about 12.5 feet, which indicates that the 12-foot-diameter treadwheel must have been partially set into a floor well to provide headroom for the convicts operating it. This corresponds with the c1841 plans by Laing.

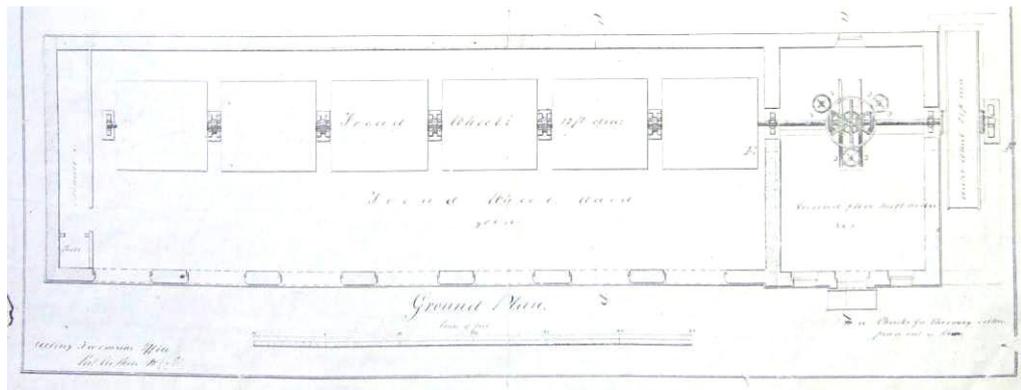
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<sup>25</sup> This opening was bricked in during the Penitentiary conversion.

<sup>26</sup> Jackman, Preliminary Notes', 2009. Brand Papers, Vol 2, p 357.

<sup>27</sup> Both were filled in during the conversion to a Penitentiary.

<sup>28</sup> The south doorway was converted into a window in the Penitentiary; all evidence of the north doorway was lost when this wall collapsed, but it is visible in the c1850 Benjamin Duterrau watercolour.



**Figure 12.** Detail of Laing, c1841, 'Design for a Corn Mill prepared to be erected at Port Arthur to be propelled other by the power of water on a Tread wheel'. Plan of the ground floor showing the six sections of the treadwheel on the left and a waterwheel on the right, both linked by shafts to the mill gears at the centre. (PAHSMA ref. HB-290/1482)

From the physical evidence, Jackman (2009) concludes that the treadwheel was situated in a well along the south wall of the ward and not along the north wall as suggested in Laing's plan (above). As we know from contemporary drawings of the Flour Mill that the waterwheel projected through the north wall of the building, this implies that the centre points of the waterwheel and treadwheel were not on the same axis, but were offset from each other<sup>29</sup>

<sup>29</sup> Tierney, 'Notes', 2009. Jackman, 'Preliminary Notes', 2009. PAHSMA [Richard Tuffin?], 'Water Reticulation at Port Arthur', nd, p 8.



**Figure 13.** A treadwheel in operation at Pentonville Prison, London, 1895. The one at Port Arthur would have been similar. (Reproduced in Tierney, *Notes of Port Arthur's Tread Wheel*, 2009)

### **2.2.7 Operation of the Flour Mill**

Once both the treadwheel and waterwheel-driven mill stones were operational, they could grind some 18 bushels of wheat (about 650 litres) an hour, in line with Captain Booth's estimates. By June 1846, the Mill provided most of the flour used at the many Tasman Peninsula convict stations. The number of convicts needed to work the treadwheel ranged between 18 and 48 at a time. There would have been two teams, each taking 15 minute shifts on the wheel. They were separated from the guards by an iron grating.

While supervised convicts and water provided the motive power for the Flour Mill, its workings were supervised by a free miller. He was appointed in August 1844 in order to carry out skilled preparation work, such as cutting grooves in the millstones.

The success of the Flour Mill, however, was short lived. By 1848, it was found upon an inspection by Superintendent George Courtney to be 'only partly in use'. And by early 1849, there were reportedly no men working the tread mill. This may have been due to a declining number of serious offenders who could be sentenced to punishment on the treadwheel, as well as changes in the approach to reform of convicts. Theories were moving away from corporal

punishment, such as the treadwheel, to prisoner isolation as exemplified by the Separate Prison, built at Port Arthur 1848 to 1852.<sup>30</sup>

The massive storage capacity of the Granary was also underutilised. Brand notes that while only part of the building was used to store grain and flour, 'a considerable section appears to have been used as a subsidiary store', presumably to the neighbouring Commissariat Store on the east side.<sup>31</sup>

There was a similar decline in the use of the waterwheel-driven Mill, with proposals as early as 1848 that it be converted to convict accommodation. It appears that its downfall resulted from a similar lack of power to the water-driven milling operation as had been seen with the convict-driven treadwheel. A visitor to Port Arthur, George Gruncell, recorded that the Mill could only operate a few hours a day because the water in the catchment dam (or reservoir) ran out and was not sufficiently replenished by the creek until the next day. The low rate of refilling was the product of the small size of the creek itself, then divided into two channels – one going to the catchment dam and the other to the bay. The amount of water that reached the catchment dam would have been further reduced by seepage and evaporation along the open, unlined headrace. Tuffin (2004) surmises that the water-related infrastructure was engineered for much heavier rainfalls than Port Arthur generally receives, indicating that the water supply – and its resultant power – was overestimated. While the drop from the catchment dam may have been sufficient to accelerate the water hitting the wheel, for overshot wheels it is the volume of the water, not its speed, which is the driving force.

In addition, the VDL farmers' monopoly on the wheat supply seen in 1839 quickly passed, as New South Wales had bumper harvests in 1840-1, followed by the entrance on the market of cheap imports from South America and then fierce competition from South Australia. This meant that there was no longer an incentive for the Convict Department to stockpile wheat in the massive granary at Port Arthur. And, in contrast to the sluggish Mill at Port Arthur, high-production steam-powered mills were introduced in the 1830s and 1840s, by engineers such as Alexander Clark, which quickly made the waterwheel obsolete in large-scale applications.<sup>32</sup>

Looking at other colonies at this time, it is apparent that mills powered by waterwheel were generally being displaced by steam power around this time. In South Australia, for example, the first milling facilities to be established were powered by steam. Three were constructed in Adelaide in 1840 and by the end of 1842 steam mills still outnumbered watermills and windmills in the area. There were watermills in the Adelaide Hills, as water was more plentiful here, but some of them had backup systems. For example, Dunn's or Bridgewater Mill, believed to be the only surviving watermill in South Australia. It was

<sup>30</sup> Brand, Vol 2, p 241. Tierney, 'Notes', 2009. Scripps, 'The Penitentiary', 1997.

<sup>31</sup> Brand, Vol 2, p 243.

<sup>32</sup> Tuffin, 'A Monument to Folly?', 2004.

constructed in 1860 with both a waterwheel and a steam engine. By the late 1860s, steam power had entirely eclipsed other types as steam machinery had become more sophisticated and efficient.<sup>33</sup>

Steam power had also arrived in Victoria by the mid-1840s, for example John Griffith's Steam Flour Mill of 1845 in Port Fairy (demolished). A very handsome surviving example is the Castlemaine Steam Flour Mill of 1856. While smaller than the Port Arthur example (three stories, five by three bays), it is also in a formal Colonial Georgian style with brick walls, heavy sandstone quoins, a broad cornice and blind arches (VHR H573). Those of the 1850s and '60s often had dual power sources, such as Anderson's Mill at Smeaton of 1861, which was powered by water and steam. Early mills in Victoria were small in scale and located close to the source of grain.<sup>34</sup>

Steam-driven flour-milling equipment may have finally been installed at Port Arthur in 1858, in the workshop complex, with the equipment transferred from the Hobart Prisoners Barracks where a treadwheel had just been decommissioned.<sup>35</sup>

### **2.2.8 The workshop complex (1842-52)**

The construction of the Flour Mill necessitated several changes to the workshop complex. The potato and iron work stores at the eastern end of the row of workshops were demolished in 1843 to make way for the treadwheel ward. (Note: In the 1836 plan of the workshops (see Figure 3), the iron work store is shown at the west end of the building. Presumably its location changed in the intervening years.)

While numbers of shoemakers had dropped from 52 in 1841 down to 15 in 1844, their numbers rebounded by 1846. Charles La Trobe visited Port Arthur that year and found 58 shoemakers, half of whom were trainees, at work under free overseer Samuel Burrows. They produced 250 pairs of boots a week, most of which were sent to Hobart Town. It was remarked that the shoes made at Port Arthur were of much better quality and hard-wearing than British imports, and Commandant Champ recommended that the Convict Department source all its footwear in VDL. He also calculated that setting up a tannery at Port Arthur as well would save the Department a total of £6,000. A tannery was opened in 1847, to the south of the Penitentiary precinct, near the Hospital, but did not operate long at this site due to health risks and noxious odours.<sup>36</sup>

In 1844, the masonry building to the south-west of the line of workshops was converted from the blacksmiths' shop and forge to a cookhouse and

<sup>33</sup> Harrison, *Flour Mills in South Australia*, 1979, pp 1, 10-11. Register of the National Estate citation for Dunn's Mill, ID 6565.

<sup>34</sup> HLCD, 'Mortlake Mill Conservation Management Plan', 2004, pp 43-45.

<sup>35</sup> PAHSMA, 'Penitentiary Workshops Archaeological Site Report', nd, p 35.

<sup>36</sup> PAHSMA, 'Penitentiary Workshops Archaeological Site Report', nd, pp 32-33. Scripps, "Interpretation Storyline, Precinct 1", pp 19-20.

bakehouse. It is not known precisely where the blacksmiths were moved to. Brand thought that they most likely displaced the carpenters from their shop. A more recent theory is that the blacksmiths took over the spacious shoemakers shop in 1844 due to the drop in the number of cobblers in that year. This would also explain why the shoemakers needed larger quarters once their number rebounded, completed in early 1847.<sup>37</sup>

By the mid 1840s, the blacksmiths' shop and forge warranted the description of 'a small industrial centre'. Seventeen blacksmiths were employed there at six forges, creating ironwork for government buildings around VDL. There was also a furnace that could cast iron objects of up to five tons. Brass frames up to one hundredweight were also cast, including bells for the church.<sup>38</sup>

## 2.3 Conversion to Penitentiary

### 2.3.1 Design influences

Just three years after the completion of the Granary and Flour Mill came the first call to convert it into convict accommodation. In June 1848 the position of Commandant was abolished. The Assistant Superintendent at Saltwater River, George Courtenay took charge of the settlement as Superintendent, and Commandant William Champ was demoted to the role of Visiting Magistrate.

Courtenay proposed that four floors of single-person cells be created in the Mill and Granary. This general proposal was supported by the Comptroller-General JS Hampton, though he preferred the creation of a double-storey dormitory to sleep 300 on the top floor, with a mess hall below that, and cells on the ground floor. The Foreman of Works Mr Willicombe investigated the Comptroller-General's proposal and warned that it would not be safe to remove an existing floor level to create the dormitory envisaged, as the floors tied the external walls together and the building had already been compromised by the removal of internal floor structures. Correspondence at the time suggests that these alterations took place in the Granary wing, as they affected the offices on its upper floor.<sup>39</sup> It is not known why or when the floor structures had been removed.

The project was put aside temporarily until the closure of the Norfolk Island Penal Settlement was announced in 1852. The convicts would be moved to probation stations on the Tasman Peninsula with the worst of them to go to Port Arthur. The old Prisoners' Barracks of 1833-35 would quickly become insufficient to house and secure the new inmates, even in conjunction with the new Separate Prison, completed in 1852. In June of that year, the Comptroller-

<sup>37</sup> PAHSMA, 'Penitentiary Workshops Archaeological Site Report', nd, pp 31-33.

<sup>38</sup> Denholm, 'Administration of Port Arthur', 1968, pp 150-151. Scripps, 'Interpretation Storyline, Precinct 1', 1997, pp 21-22

<sup>39</sup> Brand Papers, Vol 3, pp 281, 295.

General reported that the Granary and Mill would be converted into a Penitentiary.

Conversion began in September 1853 under the new Superintendent James Boyd, who had come from the Darlington Probation Station. It is assumed that the design and construction works were supervised by the Royal Engineers, who had taken over responsibility for structures located at penal stations on the Tasman Peninsula in 1835.

Boyd was a former Pentonville prison officer, bringing with him the design influences of the Pentonville Prison model. Pentonville was a model prison designed by the Royal Engineers to a brief by the inspectors of prisons and constructed in 1840-42 just north of London. It was radial in plan, as were contemporary prisons in Australia (such as an 1839 gaol in Sydney), but had several influential innovations allowing effective supervision and prisoner isolation. Among these design innovations were full-height corridors with galleries in each cell wing, allowing visibility of all cell doors from a central point – the defining attribute of the panopticon form. Prisoners were kept in individual cells that did not allow visual or verbal communication between them, though warders could inspect the cells unobserved from outside. Each cell was equipped with a sink and WC so prisoners did not have to leave it, apart from taking exercise in separate yards or attending chapel in separate pews. In case of emergency, prisoners could contact the guards by means of a bell.<sup>40</sup>

While the Separate Prison at Port Arthur is a more complete expression of the Pentonville model, in particular, it is a panopticon, the Penitentiary conversion did not escape its influence, as seen in the fit-out of the two tiers of separate cells on the ground floor. Requisitions were sent to England for much of the fittings and fixtures required in the conversion, identical to those used at Pentonville Prison. They included equipment for monitoring and communication with the individual cells, like trapdoors, ribbed privacy glass, inspection ports, bells and bell pulls, railings for the galleries outside the cells, as well as sheet lead for bathtubs and dumbwaiter apparatus to raise food from the kitchen to the shared mess hall.<sup>41</sup>

Unlike the Separate Prison, however, the Penitentiary was to house prisoners who would leave the building each day to work, so the separate cells were smaller than in the Pentonville model. They were supplemented by a dormitory at the top of the building, for convicts under a less strict regime. In addition, the cells were located within two perpendicular wings of the building, with an intervening open gallery at the north-east corner of the building, so it was not possible for a single guard to simultaneously survey all the cells at once as in the panopticon model.

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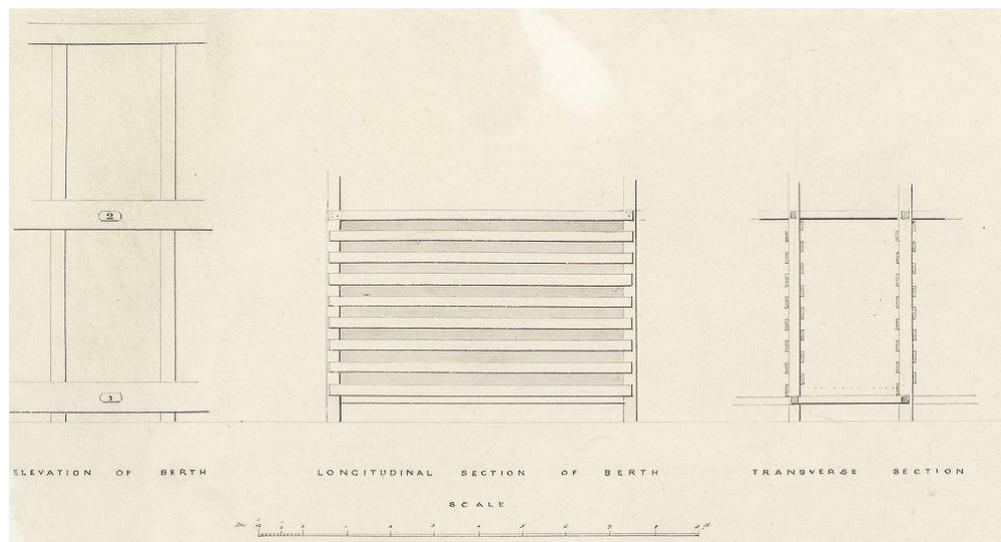
<sup>40</sup> Kerr, *Out of Sight*, 1988, pp 55, 62-63.

<sup>41</sup> Brand Papers, Vol 3, p 282.

Category 3 convicts were in the Quarry Gang and carried out hard work like quarrying, excavating, blasting and stone-breaking, while in heavy chains. They were considered a bad influence on other convicts and were housed in the separate cells of the Penitentiary. Their daytime interaction with higher-category convicts was also limited as much as possible.

The convicts assigned to sleep in the dormitory and eat in the dining hall were Category 1 or 2. These were men in the Wharf Gang (Cat. 2) who served in light chains at work burning shell or limestone to make lime and charcoal, carting and moving timber. Those who had reached the final stage of Ordinary Labour (Cat. 1) worked at skilled trades such as blacksmith, carpenter, wheelwright, cooper, sawyer, splitter and brickmaker.<sup>42</sup>

These men slept in two tiers of 'separation cages' ranged along the north and south walls of the top-floor dormitory, separated by a wide passage lit all night by kerosene lamps suspended from the open roof trusses. From the c1864 drawings, it appears that it was only located in the long east-west part of the building and not in the south return (though errors have been found in this set of drawings). This is strengthened by a mention by the Comptroller General of 'one long dormitory' in 1848.<sup>43</sup>



**Figure 14.** Detail of the 'separation cage' bunks in the Penitentiary, c1864, showing an elevation and details of the staggered battens between them. (PAHSMA ref HB P No 1)

The convict slept with his head near the wall and feet pointing to the centre of the dormitory. Each 'cage' was separated from its neighbour by staggered boards which prevented visual or physical contact between neighbours, but allowed air circulation. Kerr (1984) considers the Port Arthur Penitentiary

<sup>42</sup> Tuffin, 'Penitentiary ablutions block: Archaeology Report, 2004, pp 13-14.  
<sup>43</sup> Brand Papers, Vol 3, p 295.

dormitory to be the 'apogee' of the fashion for sleeping cages. The battened sleeping cages were previously 'perfected' by Superintendent Boyd at the Hobart Prisoners' Barrack in 1847. Prior to this time, the individual bunks had been divided by a low and removable dividing board about 14 inches high. The dividing boards proved little deterrent to convicts who sought to interact sexually or otherwise with their neighbours, hence their replacement with staggered battens.<sup>44</sup>

### **2.3.2 Alterations to the building**

To effect the conversion, the waterwheel was removed from the space between the L-shaped Granary and the Mill house, and this gap was infilled with brick walls and a row of windows to match those on either side. The same was done with the full-height loading bays on the north face of the Granary. Inside, the floor levels were adjusted to be continuous, and a stair tower was added to the centre of the north elevation. The tower was square in plan and had a stone balustrade at the top. It had windows on each side, apart from a door on the west side, and a clock at the third level. Individual cells were initially planned for the bottom two levels to house 144 prisoners, and on the top storey a sleeping dormitory for up to 513 convicts who had progressed to a more relaxed regime. The intermediate floor would house a large dining hall and scullery, accommodation for constables and officers on duty, and a Catholic chapel. A two-storey Bakehouse/kitchen addition was constructed on the west end, and ablutions facilities created in the rear yard. In addition, the workshops on the west side of the site were rebuilt and substantially enlarged.<sup>45</sup>

The four-level loading bay on the north elevation of the Granary was infilled with bricks and a single column of windows. The same was done to the north and south elevations where the waterwheel had been. The face bricks used for these alterations are slightly different in colour than the rest of the building, and the stone quoins around the windows are larger than the originals. In addition, there are timber lintels to the fourth-floor windows where the waterwheel once was, instead of stone lintels as elsewhere. Some of the quoins to the waterwheel opening survived on the interior faces of the north and south wall.

Prior to the conversion there were varying numbers of storeys and differing floor levels in the Granary and Flour Mill. Jackman (2009) posits that in the Granary there were four floor levels in the return in the south-east corner, and just three in the main northern section, where there was a two-storey gallery encompassing the first and second floor levels. The Flour Mill also had three levels, with a two-storey gallery between the first and third floors. The ground floor, however, was about a foot taller in the Mill house, and even higher in the treadwheel ward (12.5 feet) to accommodate the 12-foot treadwheel. During the conversion, the gaps in the third and fourth-storey floors were regularised and bridged between the two buildings where the waterwheel had been. The first-

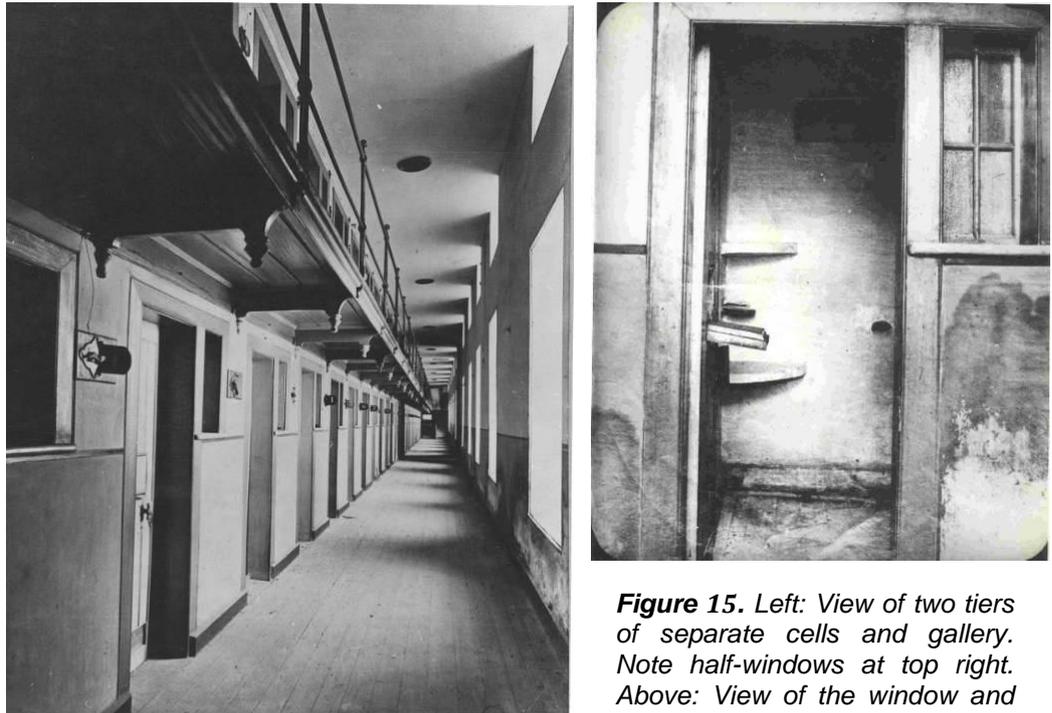
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<sup>44</sup> Kerr, *Out of Sight*, 1988, pp 57-59. Kerr, *Design for Convicts*, 1984, p 152.

<sup>45</sup> GML, Conservation Plan, 2000, Vol 2, p 87. Brand Papers, Vol 3, p 282.

storey floor structure was removed to permit the insertion of two levels of free-standing individual cells at the centre of the building.

These cells were arranged back-to-back and the upper cells were accessed via a gallery. As the cells did not have any external windows, fresh air was supplied in part via vertical cavities in the brick wall between two cells. A cover plate of iron with holes punched in it covered the vent cavities on either side. Additional ventilation to these tiny chambers was provided via perforated plates in the cell doors as well as a sheet of perforated zinc in one of the panes of the narrow window that transmitted light from the gallery. The glass was ribbed (or 'fluted') to prevent the convicts from looking out, as at Pentonville Prison.



**Figure 15.** Left: View of two tiers of separate cells and gallery. Note half-windows at top right. Above: View of the window and interior of a cell. Both c1880s. (PAHSMA ref. 66-1073, 66-1075)

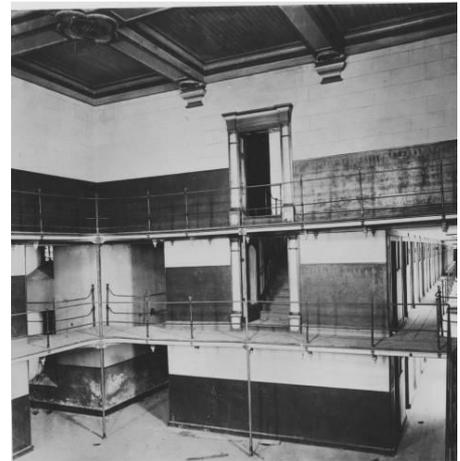
As the ceiling levels of the cells were quite low, the two tiers fit into the ground floor and just half of the first floor of the former Mill and Granary. The middle floor, which housed the dining hall in the main part of the building and chapel in the southern return could then have its floor lowered to create a very high ceiling. In order to accommodate these changes in ceiling and floor heights, a single skin of bricks was added to the internal walls of the separate cell section, possibly to conceal the former location of the removed floor structure. During

investigations in 1991, it was found that this skin was poorly bonded to the external walls and had few header bricks bonded into the wall behind.<sup>46</sup>

A second change was to former first floor windows. The floor of the dining hall level now intersected these windows, so the upper halves were bricked in from the interior, leaving the timber sash exposed on the exterior. The bottom halves of the windows were still functional and lit the upper level of the separate cells.<sup>47</sup>



**Figure 16.** Penitentiary entrance hall, looking toward the east entrance, c1880s. (PAHSMA ref 66-1070)



**Figure 17.** Penitentiary entrance hall looking west, c1890. The two tiers of solitary cells are visible at right; entrances to the dining hall are visible at centre. (PAHSMA ref 66-1072)

The Penitentiary conversion was completed in April 1857. By that time, the number of convicts at Port Arthur had declined, so it could house a maximum of 484 convicts (136 in cells), down from the original plan of 604. This meant that the sleeping bunks in the dormitory could be two tiers high, instead of three, as originally planned

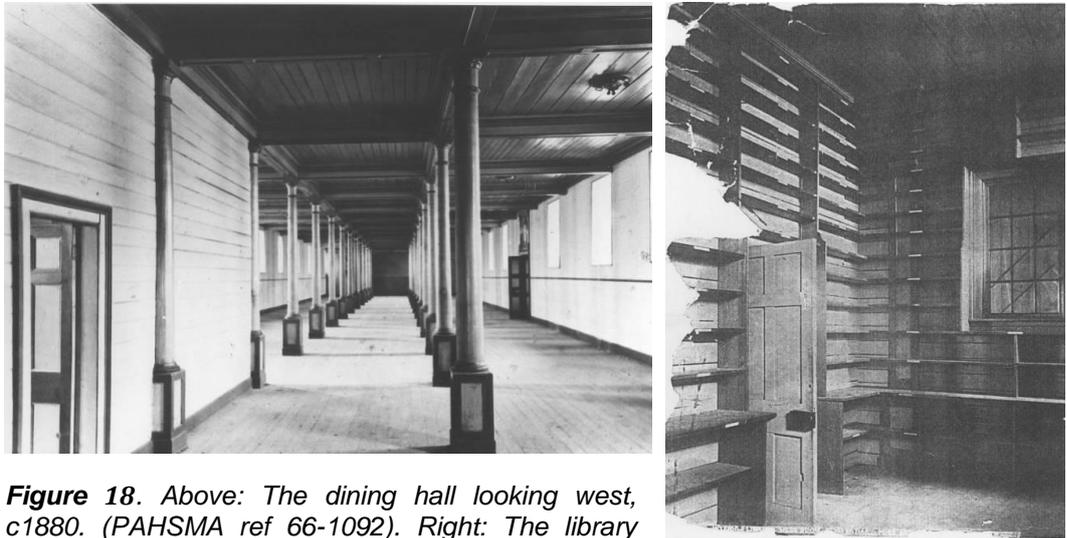
A three-storey entrance hall, ringed with balustraded galleries, was located at the north-east corner of the building, entered via a newly constructed entrance porch on the east elevation. It provided direct access to the solitary cells, which were situated along the centre of the building (in both wings of the L-shaped plan) in two sets of back-to-back tiers. As the cells did not have direct access to sunlight, they faced an open gallery space that allowed greater sun penetration.

<sup>46</sup> Brand Papers, Vol 3, p 302. Chin, 'Construction chronology: The Penitentiary', 2006, p 24.

<sup>47</sup> Jackman, 'Penitentiary/Flour Mill Archaeological Interpretation – Preliminary Notes', 2009. Tierney, 'Notes', 2009. Chin, 'Construction chronology', 2006. Jackson, 'Notes on Interior Details, Penitentiary', 1998 - this document also records the early decorative scheme as recreated from physical evidence and the Beattie/Anson photographs.

The upper rows of cells were reached via a narrow walkway with a cast-iron railing. Inside each cell was a hammock made of sacking and suspended from hooks in the walls when in use. The inmate's belongings were kept on two built-in shelves in the corner.

A staircase led from the first-floor gallery in the entrance hall (see Figure 17) up to the two-storey Catholic chapel (completed in 1858) in the south return, and the second floor dining (or mess) hall in the main wing (running east-west). The dining hall was a large room about 161' by 32' in size, with the ceiling supported by a double row of columns. In the evenings it also served as a school room for interested convicts, and a large library of books was located at one end (it held over 13,000 volumes in 1871). There was a raised platform at the west end with a harmonium, presumably for schoolmaster to lead lessons and hymns.

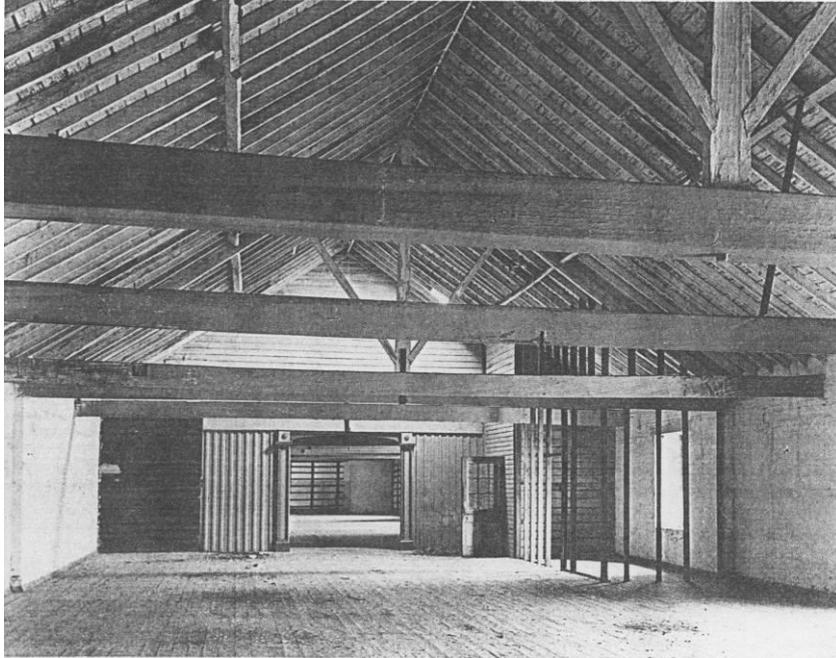


**Figure 18.** Above: The dining hall looking west, c1880. (PAHSMA ref 66-1092). Right: The library after the books had been removed, c1880s. (PAHSMA ref 66-1085).

On the top floor was the dormitory. It housed two tiers of bunks, which were separated from each other by closely spaced battens that permitted air circulation but prevented interaction. It was ventilated via the skylights in the open rafters. The bunks were situated against the external walls of the building, so most of the windows on the top floor were bricked in from behind and rendered, with the timber sashes removed.

Once completed, the Penitentiary was described as 'a noble building ... with a turret in the centre'. The interior was well detailed, in a restrained fashion. As seen in the photos taken shortly after its closure in 1877, the entrance hall was a large and impressive three-storey space with cast-iron balustrading around it, pedimented doorways, and a timber-lined ceiling with boxed-in beams and

quatrefoil bosses at the junctions. The walls were finished with a high painted dado and ruled plaster in imitation of ashlar above. Even the galleries around the entrance hall and to the solitary cells had turned timber drops beneath them.



**Figure 19.** *The top-storey dormitory space, after removal of the bunks, c1880s. (PAHSMA ref 66-1083)*

Jackman (1998) has documented some of the early colour schemes, which used Blackwood stained and shellacked to look like mahogany, dados painted in a terracotta distemper, with a darker struck line, and white or tinted limewash above. A visiting journalist from the Hobart *Mercury* described it in 1870 (shortly after a 1867 repainting) as more of a ‘mansion than a house of correction for criminals’, citing the ‘magnificent staircase’, ‘carpeted passages’, ‘burnished banisters’, and ‘magnificent dining room’. He also commented that externally it had ‘a very imposing appearance, perhaps more so than any public or private building in Tasmania’, but looked more like a warehouse than a prison (or mansion, for that matter).<sup>48</sup>

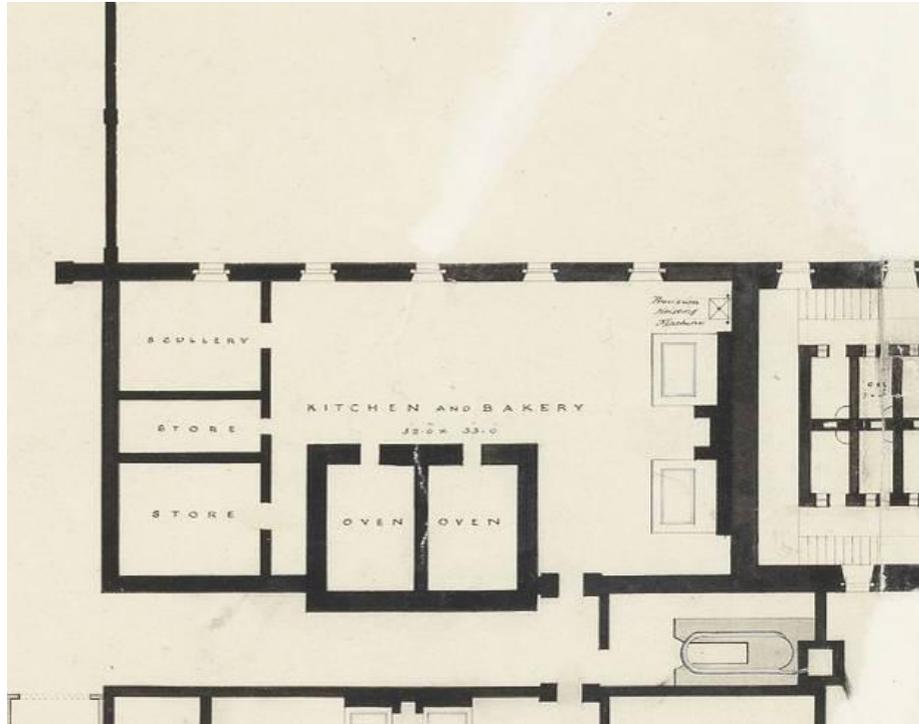
### **2.3.3 Bakehouse**

The journalist also favourably commented on the ‘well appointed kitchen’ and ‘hot and cold bathroom’. These facilities were necessitated by the new use of the building. The present Bakehouse replaced the earlier cookhouse and bakehouse which had taken over the blacksmith’s shop and forge in 1844. This

<sup>48</sup> Scripps, ‘The Penitentiary’, 1997. Brand papers, Vol 3, p 283. Jackson, ‘Notes on Interior Details’, 1998.

building was demolished in the 1850s to make way for the expanded workshop buildings, and its functions moved to the new structure.<sup>49</sup>

### *Construction of the Bakehouse/kitchen*



**Figure 20.** Plan of the Bakehouse, c1864. The bake ovens are visible on the south wall and the cooking ovens on the east (right) wall. The boiler and square chimney are located south of the cooking ovens. (Archives Office of Tasmania, ref. PWD266-1-1779)

The Bakehouse/kitchen was completed in 1858. It was a two-storey, gable-roof structure appended to the west end of the Penitentiary. Like the rest of the building, it had brick walls with stone quoins to the windows and corners, and a timber shingled roof. The bricks are light in colour and correspond to those used for alterations in the Penitentiary conversion. It is likely that these bricks were made from the Brickfields Hill clay pit, which opened by 1846, in contrast to the red bricks used in the Mill and Granary construction (believed to be from the Opossum Hill clay pit). The Bakehouse was built on the site of the c1835 workshops, which had log footings. New footings of sandstone rubble over a lime concrete were laid on top of the log stringers as part of the 1850s works.<sup>50</sup>

<sup>49</sup> Brand Papers, Vol 2, p 191. PAHSMA, 'Penitentiary Workshops Archaeological Site Report', p 32.

<sup>50</sup> Brand Papers, Vol 2, p 52. PAHSMA, 'Penitentiary Workshops Archaeological Site Report', p 35. The log footings uncovered during 1996 excavations were originally thought to have been constructed for the Bakehouse, but this is not the case.



**Figure 21.** Interior of the kitchen, looking east, c1880s. The food hoist is visible at far left, as well as the location of three of the four cooking ovens (with coppers removed). (PAHSMA ref 2845)

The ground floor had storage areas and a scullery at the west end, but most of the space was taken up by the food preparation area. This included two large baking ovens on the south wall. There were also four cooking ovens on the east wall, adjoining the Penitentiary, each equipped with a large pot (or 'copper') for preparing meat, vegetables, soup and gruel. Food was delivered to the dining hall on the third level of the Penitentiary by the 'provision hoisting machine' imported from England, located in the north-eastern corner. The upper floor served as a wardman's room. This may have been reached via the staircase in the south-east corner of the building, the scars of which are still visible on the walls.

As shown in an 1880s photograph (below), the baking and cooking spaces were divided by a wall. It is not shown in the c1864 plans (Figure 20), so it may have been added later, or may be yet another error in these plans.



**Figure 22.** View of the baking ovens, looking south-east, c1880s. Note the wall separating this room from the cooking ovens (left). (State Library of Tasmania, image NS1013-1-1645)

### *Feeding the convicts*

From its first decade in operation, convicts at Port Arthur were considered well fed by the standards of the day. Lieutenant-Governor Arthur was fully aware that the Convict Department could not extract useful labour from a convict without providing a sufficient amount of food 'to preserve him in full health'. For this reason, the long-term withholding of food was not considered a suitable punishment for minor infractions. Convicts subject to the more severe punishment of solitary confinement for a week or more, however, were forced to subsist on a diet of bread and water.

In the early 1830s, the daily ration for convicts consisted of flour, porridge oats, fresh or salted meat, salt, vinegar and soap. Convicts could cultivate their own plots of land to supplement their diet with vegetables. By the time the present Bakehouse/kitchen was constructed, all food was provided to convicts, including vegetables. While sufficient to keep heavy labouring men in good health, the diet was nothing if not monotonous, and almost all of it was cooked by stewing in large coppers with minimal seasoning.

Regulations for the Penal Settlement of 1858 give a picture of the meals provided during the time the Penitentiary was functioning. There were two classes of rations served to the men who lived in the Penitentiary: Class 1 for 'convicts at hard labour', and Class 2 for 'convicts at light labour'. The hard labouring convicts had gruel (a thin porridge sweetened with molasses) and

bread for breakfast. Four days a week mid-day dinner comprised 10 ounces of fresh meat, vegetable and barley soup, 12 oz of potatoes and 6 oz of bread. Other days, the fresh meat was substituted with bacon or salt meat, and the soup with broad beans or peas. On Sundays, when they were free from physical work, dinner was just potatoes, bread and suet pudding. Supper was a light meal of 12 oz of bread and sweetened tea. The diet provided to those on light labour was basically the same, though amounts of food were proportionately reduced, for example, 8 oz of fresh meat instead of 10 oz. While not mentioned in the 1858 Regulations, the 1831 ration scales called for convict constable, overseers and 'mechanics and artizans who conduct themselves well and render themselves particularly useful' to receive luxury items (tea and sugar) daily in addition to the standard ration.<sup>51</sup>

In 1865 a 'digester' was installed for reducing bones and gristle into edible soup, making it more nutritious. It was powered by a boiler in the adjacent Laundry, with a massive tapering square chimney. It is not known how many of the cooking ovens were equipped with a digester.

In 1860 it was commented by an inspecting committee that the kitchen could feed twice as many men as currently at Port Arthur. Indeed, by 1870s the Bakehouse was supplying food for the entire settlement, and not just those housed in the Penitentiary. Just before the settlement closed, when numbers had dropped, the Bakehouse was cooking five whole sheep and 700 loaves of bread a day.<sup>52</sup>

The enormous task of cooking and baking bread for the hundreds of people was carried out by convicts. During the 1830s and '40s eight convicts were employed at this task. As it was light labour compared to working in the timber gangs (and the access to food), posts in the kitchen were classed as 'special employment'. A convict was not permitted to work as a cook until he had served at least one-sixth of his sentence.

As with everything at Port Arthur, there were problems with theft or blackmarket dealings in flour and other foods. There was also an Officer in Charge of the General Kitchen, Bakery and Laundry. He was responsible for seeing that the rations issued each day by the Storekeeper were of the correct amount and good quality, and then to ensure that no supplies were misappropriated during the course of preparing meals. In response to complaints from convicts, from 1856 one convict was delegated each day to second the Officer's job, observing when the rations were dispensed by the Storekeeper and when they were cooked and apportioned out to the messes that none went astray and the food was evenly divided.

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<sup>51</sup> Denholm, 'Administration of Port Arthur', 1968, pp 136-7. Convict Dept, Tasmania, *Regulations for the Penal Settlement on Tasman's Peninsula*, 1991, pp 65, 57, 59. Scripps, 'Interpretation Storyline, Precinct 1', p 9.

<sup>52</sup> Austral Archaeology, 'Archaeological excavations', 1996.

At night, the Officer locked up the Bakehouse and took away the keys. A single baker was allowed to remain inside at night. If more than one had to work, a Constable was appointed to oversee them. This was to prevent them selling off most of the fresh bread prior to breakfast.<sup>53</sup>

Meals were delivered in bulk to gangs of convicts called 'messes'. The 'mess-men' for each gang was responsible for delivering tubs of soup and other foods to the gang's table, as well as eating utensils. These had to be returned to the Officer on duty at the end of the meal. Upon arrival in the dining hall on the third floor of the Penitentiary, convicts had to hang up their caps. They stood to say grace at the beginning and end of the meal. It was considered a punishable offence to make 'slop' on the tables, floor or walls, or to deface the furniture.<sup>54</sup>

### **2.3.4 Ablutions area and Laundry**

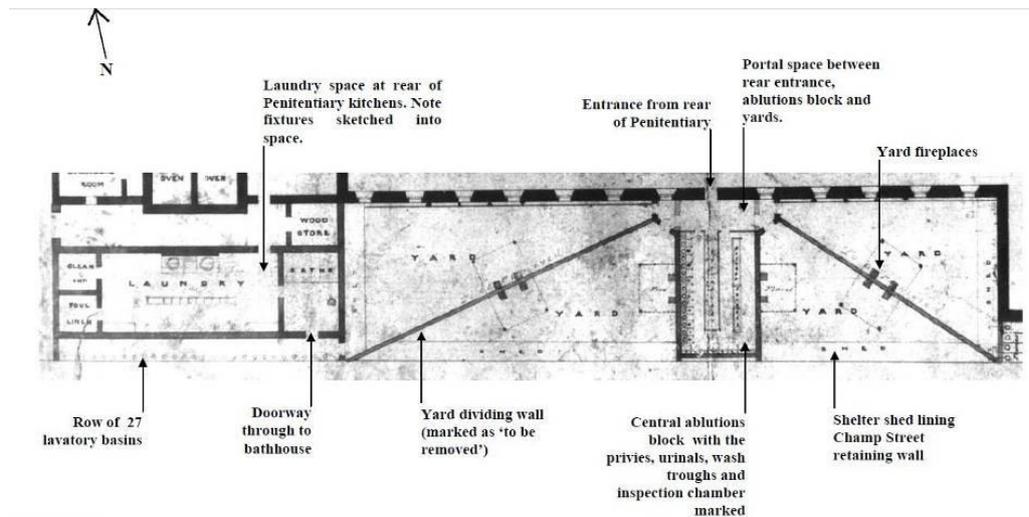
Following the conversion of the Granary and Flour Mill into accommodation for convicts, an ablutions area, was created at the rear of the building, between the south elevation and the retaining wall to Champ Street. It was completed by 1857. A Laundry was constructed on the west side of the ablutions area, behind the Bakehouse.

As shown in the c1856 plan below, the yard behind the Penitentiary served multiple functions. There was an ablutions block at the centre of the yard, linked to the Penitentiary building by a gable-roofed portal (whose outline is still visible on the Penitentiary wall where flashing was keyed in). On either side of it were four exercise yards furnished with fireplaces and shelter sheds. On the west side, behind the new Bakehouse, was the Laundry and a row of privies squeezed in between the Laundry building and the Champ Street retaining wall. Baths were located in the east end of the Laundry, accessible from one of the exercise yards.

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<sup>53</sup> Scripps, 'Interpretation Storyline, Precinct 1', pp 12-13. Convict Dept., *Regulations*, pp 10, 25-26.

<sup>54</sup> Convict Dept. *Regulations*, 1991, p 45.



**Figure 23.** Plan of the abluitions area, c1856. (Tuffin, 'Penitentiary Ablutions Block Archaeological Report, 2004)

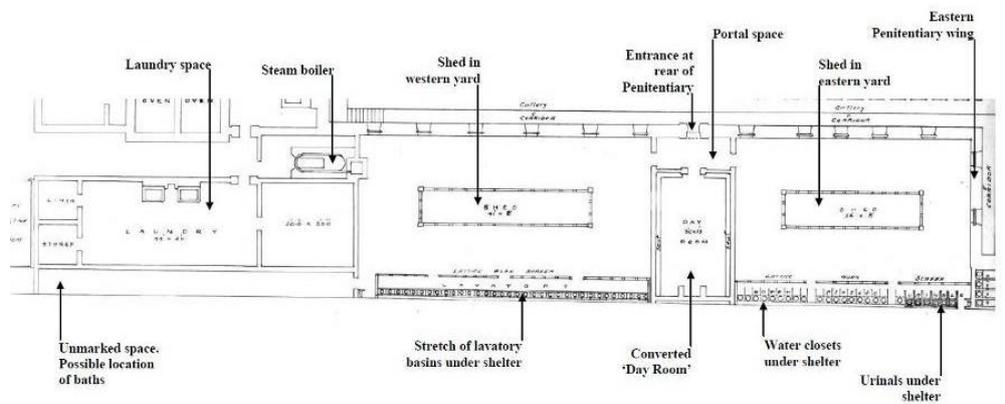
When completed in 1857, the brick-walled abluitions block (or lavatory) had wash troughs lining the east side of the room and 15 privies on the opposite wall. In the centre of the building was the enclosed 'inspection' area, so that the unrelenting supervision of the convicts could continue unabated. There were also eight partitioned urinals on the south wall.

Unlike the abluitions block, the exercise yards on either side of it continued the theme of separation between the different classes of convicts during their limited free time. The abluitions block sat roughly in the middle of the yard, dividing it in two. Each side was further subdivided by a diagonal brick wall. Set against the walls, and the east and west walls of the abluitions block, were open fireplaces set beneath small shelters. There was also a long, narrow shelter with fixed seating in each of the four quadrants. Baths were located in the east end of the Laundry building, where hot water would have been available from the wood-fired boilers.

The abluitions block and exercise yards were given a complete make-over around 1862. The abluitions block was converted to a day room for 'effectives' (those who could labour) to use during wet weather, with benches lining the walls and a fireplace at the south end of the building. It had a shingle roof and six skylights, both of which most likely dated to its construction in 1857.

The diagonal walls dividing the exercise yards and the outdoor fireplaces were all removed, creating two large yards on either side of the day room. Long timber shelter sheds were erected at the centre of each yard. The washing basins and privies, displaced by the new day room, were moved to narrow shelters along the Champ Street retaining wall. These may have been the 1857 shelter sheds in this location, put to new use and enclosed with 'lattice work screens'. Six urinals and 19 'water closets' were located in the shelter on the

east side of the yard. A row of 34 washing basins was in the western shelter. The privies located behind the Laundry were removed and are believed to have been replaced with baths. The bathtubs were removed from the room at the east end of the Laundry, and this space may have become a clothes drying room.



**Figure 24.** Alterations to the ablutions area and creation of the day room, c1864. . (Tuffin, 'Penitentiary Ablutions Block Archaeological Report, 2004)

The provision of a day room and removal of the strictly separated exercise yards suggests a loosening of the Port Arthur regime in the early 1860s, and this has been seen as a response to the ageing and weakening of the convict population.<sup>55</sup> Alternatively, Tuffin (2004) posits that the changes to the ablutions area were primarily driven by a desire to increase sanitation and cleanliness – removing the privies and wash basins from the cramped and airless ablutions block to the open-air shelters – and to increase levels of surveillance during these daily activities.

The Laundry was also completed around 1857. It was a brick building set behind the Bakehouse and linked to it by two walls. The gabled roof was shingled, with skylights. Inside, the floor was flagged with sandstone. When constructed, the Laundry comprised a large central room where the washing was done in two coppers on the north wall, with drying tables on the south wall. Water had to be boiled separately, probably in kettles over a fireplace between the coppers. There were two small rooms at the west end for storage of clean and 'foul' linen. At the east end was the room containing six baths for the convicts, which could be entered from the exercise yards. Adjacent to this room was a wood store which linked the Laundry to the Bakehouse.

The drying room for the Laundry may have been initially located in the space between the Laundry and the Bakehouse, where they are linked by two brick walls. There is a doorway (filled in) with a stone lintel about 1 metre above floor level leading into this intermediate space, and windows on the east and west

<sup>55</sup> PAHSMA, 'Penitentiary workshop and ablutions: historical analysis', 2003. Author's name not cited.

walls of the space. This space is adjacent to the large bake ovens, which would have provided continuous heat to dry the laundry. Alternatively, this doorway could have provided access to the Clothing Store on the upper floor of the Bakehouse, shown on the c1862 plan.



**Figure 25.** *The surviving north wall of the Laundry. The fireplace for boiling water is at centre, ground level. To the right is an elevated doorway (indicated by a stone lintel), now bricked in. (Andronas Architecture, 2010)*

In the early 1860s, around the time the ablutions block and exercise yards were undergoing alterations, several changes were made to the Laundry. A hot-water boiler was installed by 1864.



**Figure 26.** View of the Laundry and Bakehouse from Champ Street, looking north-east, after 1864 when the laundry and kitchen digester boiler was installed (note its free-standing chimney). Note the small, hipped-roof structure linking the two building – this may have been the drying room. (PAHSMA ref 66-1030)

The baths were moved from the east-end room, and the eastern wall of this room and the wood store were extended several feet east. This was to accommodate the new steam boiler and chimney that powered the kitchen 'digester'.<sup>56</sup> It appears that the drying room between the Laundry and the Bakehouse ovens was abandoned at this time, as surviving hooks for the hot-water piping from the new boiler show that the pipe crossed over the doorway on its way to the laundry tubs, so it must have already been bricked up. The former bathroom at the east end of the Laundry was most likely converted to the new drying room, as it was adjacent to the new boiler.

The Laundry had an important role to play, as each resident of the Penitentiary had to be supplied with a fresh shirt twice a week in summer and once a week in winter, as well as clean socks once a week. As duties in the Laundry were considered relatively light, it was a sought-after posting.

Every six months, the convicts were issued with a jacket, waistcoat, a pair of trousers, a shirt, a pair of boots and a cap. It appears that the convicts were responsible for cleaning their uniforms by themselves, as there was a regulation in 1868 that stated: 'prisoners are not permitted to wash their persons or clothes on the works – thus [sic] must be done at the Penitentiary.

<sup>56</sup> Tuffin, 'Penitentiary Ablutions Block Archaeological Report', 2004, p 11.

Apart from washing hands and face each morning in the ablutions block, convicts were expected to 'wash their feet the evening previously to putting on clean shirts', i.e., before the clean shirts were issued once or twice a week. And each got a warm bath in the bathhouse each Saturday afternoon from 4 pm.<sup>57</sup>

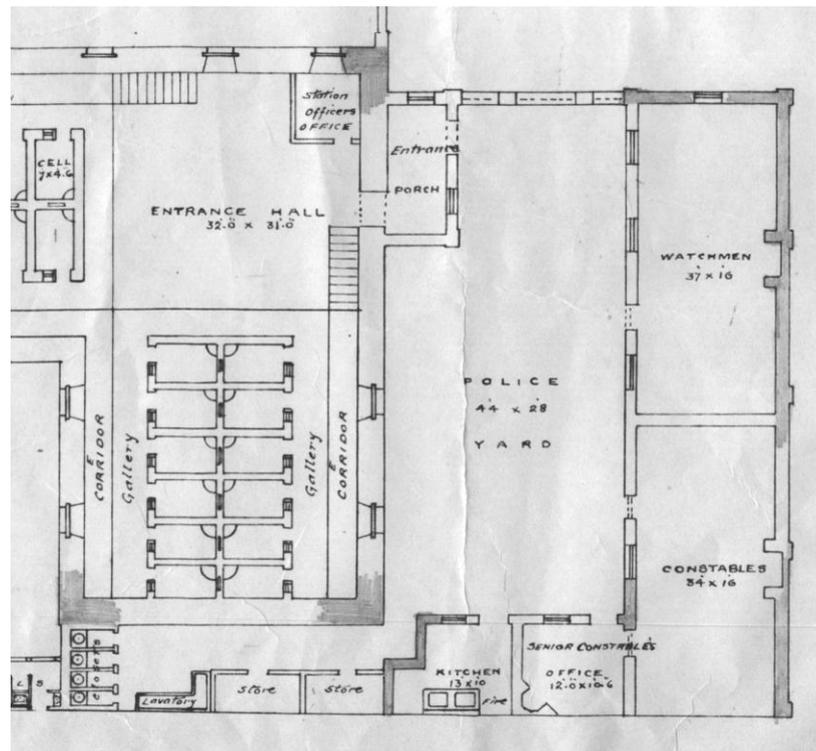
### **2.3.5 Watchman's Quarters**

To provide the additional supervision required for the hundreds of convicts housed in the newly converted Penitentiary, a Watchman's Quarters (also known as the Constable's and Watchmen's Barracks) was constructed across a small courtyard at the east end. The courtyard was entered via a gateway on the north side, set just back from the entrance to the Penitentiary.

Prior to its completion in mid 1858, the constables and watchmen had been housed in the Penitentiary. The watchmen were unarmed police, drawn from among the better-behaved and trusted convicts, who operated under supervision by military officers and constables. A convict could be appointed to such a trusted position after a period of good conduct equivalent to one third of his entire sentence.

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<sup>57</sup> Scripps, 'Interpretation Storyline, Precinct 1', 1997, pp 7-8. Convict Dept., *Regulations*, 1991, p 40.



**Figure 27.** Plan of the Watchman's Quarters at the east end of the Penitentiary, c1864. The watchmens' room is near the front of the 'Police Yard', behind is the constables' room. In the west wing is the Senior Constable's Office, a kitchen, two store rooms, a small laundry and four privies. It should be noted that the watchmen's room in fact ended in line with the south wall of the Penitentiary entrance porch, but has been drawn incorrectly. (PAHSMA ref HB P No 1)

It was a small, single-storey building, in an L-shaped plan, constructed of brick. The hip roof was clad with timber shingles and lit with two roof lanterns. The northernmost room contained berths for up to 16 watchmen, and the room behind it berths for constables and mechanics. The small wing at the south end, abutting the Champ Street retaining wall, had a room for the Senior Constable and a cookhouse. Beyond the cookhouse, tucked behind the south wall of the Penitentiary (and sheltered beneath the Champ Street bridge) was a woodshed, wash house, urinals and privies.<sup>58</sup>

### 2.3.6 Parade Ground

#### *Creation of the Parade Ground*

Reclamation of the cove had been mooted as early as 1839 as part of an early plan to construct a penitentiary down the hill from the Church. While the plans for the penitentiary were not realised at the time, the west end of the bay and

<sup>58</sup> Brand Papers, Vol 3, pp 283, 306. Kerr, *Design for Convicts*, 1984, p 152. Scripps, 'Interpretation Storyline, Precinct 1', 1997, p 8.

the corner of the creek mouth were reclaimed in 1841. A double line of wooden piles was driven across the bay in a line extending north from the end of the workshops, the area behind them filled with stones and faced with planks<sup>59</sup>



**Figure 28.** Detail of 1833 plan of Port Arthur showing the original extent of the sand exposed at low tide that was reclaimed in 1841 and 1854. (PAHSMA ref. HM 1833/1)

When the Granary and Flour Mill were built, they fronted a large cove on their north side, with the outlet of Settlement (Radcliffe) Creek located well to the west of the buildings at high tide (roughly where Champ Street crosses it). At low tide, however, a large area of sand was exposed (about two-thirds of the area since reclaimed). Proximity to the high-tide line and water's edge led to 'a constant undermining action on the foundations'.

Gradual and informal land reclamation appears to have taken place with the construction of successive workshops at the west end of the Penitentiary precinct. The c1835 range of workshops was constructed in part on log-crib landfill. Hurst's survey plan also suggests that the shoreline adjacent to the workshops was extended slightly northward c1846, possibly with the construction waste left from Granary and Flour Mill.<sup>60</sup>

<sup>59</sup> Brand Papers, Vol 4, p 34. GML, Conservation Plan, 2000, Vol 2, Radcliffe Creek site card.

<sup>60</sup> PAHSMA, 'Penitentiary Workshops Archaeological Site Report', nd, pp 35, 32.

More extensive reclamation works began in concert with the Penitentiary conversion in late 1854. Completed the following year, the works not only increased the stability of the Penitentiary, but provided a valuable flat, open area. When the original proposal was made to convert the Mill and Granary into a Penitentiary, it was proposed that the bay be filled in to allow for washing sheds and privies. Instead, these facilities were built behind the Penitentiary, and the reclaimed land used largely as an area for musters of the convicts who resided in it.<sup>61</sup>



**Figure 29.** View of the Penitentiary c1860. The Parade Ground wall is visible before the Penitentiary, in front of which is the open grassed area and covered stream (just visible). The grassed area is surrounded by a paling fence. (PAHSMA ref 66-1855)

A muster yard, or Parade Ground as it was called on plans, was created directly in front of the Penitentiary, while the rest of the reclaimed area was left to grass. This open area was often used for the storage of timber and bricks ready to be shipped out. To enlarge the usable area, Settlement Creek was covered over. The initial plan had been to use stone, but in the end timber planks were used. A paling fence was then erected to surround the larger grassed area, on the north and south sides of the covered stream. A wire fence was installed along

<sup>61</sup> Brand Papers, Vol 3, p 283; Vol 4, p 39. Tuffin, 'Penitentiary Ablutions Block Archaeological Report', 2004, pp 15-16.

the new water's edge. In 1873 the creek was re-routed to 'prevent the lower settlement buildings being flooded.'<sup>62</sup>

The Parade Ground was a formal space, demarcated by a low brick wall with stone copings, constructed in 1860, and paved with gravel. This formality was reduced, initially, by a timber tramway that ran through it to the wharf during the mid 1860s at the height of the timber trade. The diminished formality and control over this space due to the presence of the tram line is indicative of the tensions inherent between the penal and industrial aspects of the settlement.

Timber was stored in piles in the grassed area outside the Parade Ground. At first the brick wall only enclosed the north and west sides of the ground, the Penitentiary serving as a third wall. There were two gates in the western wall and one in the northern.



**Figure 30.** View of the Parade Ground, c1880s. The timber balustrade is visible at the west (right) end, as is the entrance gate to the Workshop Complex (far right). (State Library of Tasmania, image AUTAS001126184118)

Sometime between 1860 and 1863, the Parade Ground was further formalised and enclosed. The brick wall was continued along the eastern side, with one gate, and the entire wall was heightened by the addition of piers. In between the piers a decorative timber balustrade was installed. With the higher wall, in combination with iron gates, the Parade Ground could now effectively contain convicts.

<sup>62</sup> Brand Papers, Vol 4, p 158.

In the late 1860s, the north gate was closed up, and it seems that the tram tracks were removed around the same time. A large, ornamental sandstone fountain was then erected at the centre of the north wall, several metres west of where the gate had been. The fountain was square in plan with ornate piers at each corner. It was described as being 'like a pulpit, but which is a cistern where iron ladles on chains were available for the men to drink from'. Water was supplied through gutta-percha (a natural latex rubber) piping which had become unserviceable by the mid 1870s.<sup>63</sup>



**Figure 31.** *The Parade Ground fountain, c1880s. Fragments of the timber balustrade are visible to the left, above the low brick wall. (State Library of Tasmania, image AUTAS001125643049)*

#### *Use of the Parade Ground*

While its name suggests otherwise, the Parade Ground was not used for parades of soldiers, but for musters and inspections of the convicts. This was yet another part of their constant regimentation and supervision. Convicts had

<sup>63</sup> Tuffin, 'Penitentiary Parade Ground: pictorial timeline', 2003. Brand Papers, Vol 3, p 287.

to stand with their 'hands by their sides, and remain perfectly silent and steady' while on muster.

After the morning muster, the Station Officer handed over gangs of convicts to their Overseer or Constable for work. The Overseers had a detailed list of the convicts in their gang, including their labour classification, sentence and specific restrictions. The gangs were led to their workplace in silence, and back again for mid-day dinner and supper. Another muster was held at the end of the workday. Sunday was a day of rest, but was still accompanied by a General Muster in the morning and church services.<sup>64</sup>

### **2.3.7 Workshop complex**

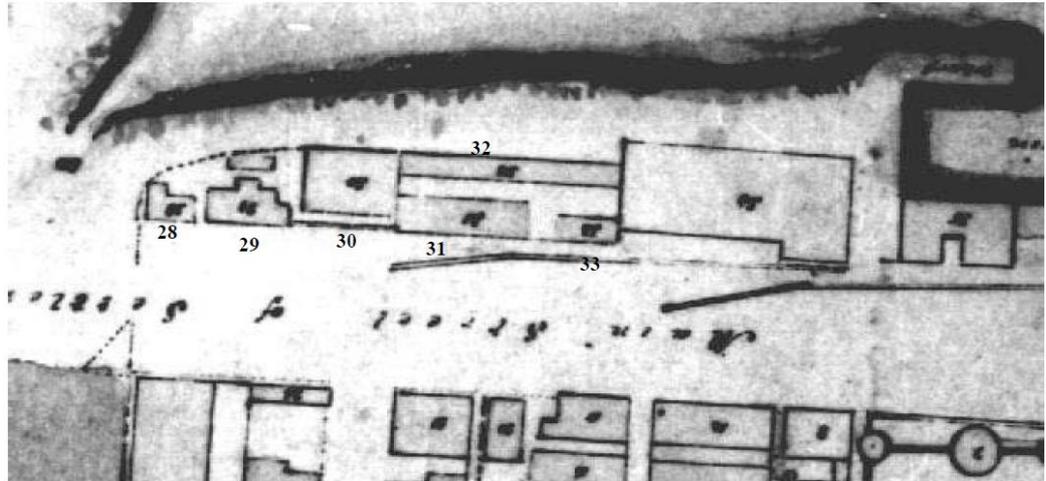
As discussed earlier, the site between the west end of the Penitentiary and the mouth of Settlement Creek (prior to land reclamation) was occupied by a growing number of workshops from the early 1830s. Their development, particularly in the 1850s, reflected the growing skills-base and increasing self-sufficiency and industrial power of Port Arthur. While in 1831 the workshops housed only blacksmiths and shoemakers, by the 1836 there were also tailors, carpenters, wood turners, and nail makers. And the sophistication of the equipment markedly increased in the 1850s with steam engines powering circular and vertical saws, lathes, bellows and a bone mill. Even more impressive: the boilers and most of the equipment had also been manufactured at Port Arthur. Much of this advancement in self-sufficiency had been driven by the boom in timber-getting. It was anticipated that the steam-powered sawmill would allow a great increase in the amount of timber that could be exported.<sup>65</sup>

As discussed in section 2.2.8, above, there was little physical change to the workshops complex during the 1840s and early 1850s, apart from the displacement of the blacksmiths' shop and forge by a bakehouse/cookhouse in 1844.

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<sup>64</sup> Convict Dept., *Regulations*, 1991, pp 21, 41.

<sup>65</sup> Brand, Vol 4, p 61.



**Figure 32.** Detail showing the workshop complex, January 1854. Numbered buildings are: 28. Senior Constable's Hut, 29. Chief Constable's Hut, 30. Cookhouse and Bakehouse, 31. Constable's Hut, 32. Workshops, and 33. Lumber Stores. (PAHSMA ref. HM MPG 537/2)

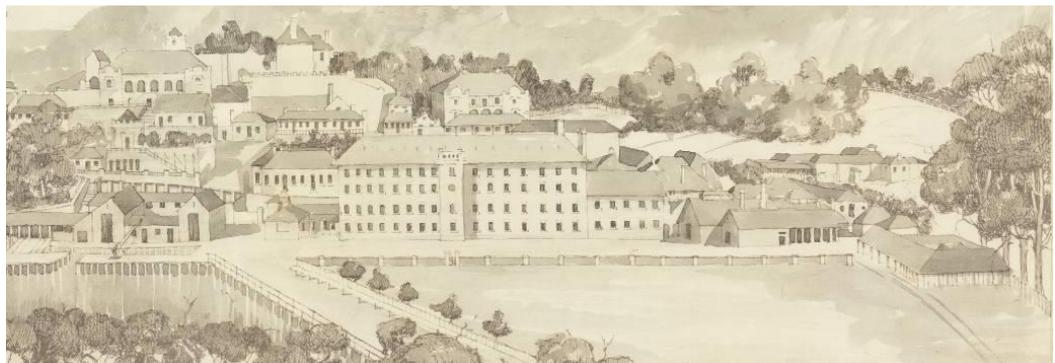
Once the Penitentiary conversion was underway, however, all of the buildings numbered in Figure 32, above, were demolished. The exception may have been one of the huts at the very western end. In their place the Bakehouse and new workshop buildings were constructed.

The Commandant reported in July 1856 that the workshop complex should be completed in a few months, though in August 1857 only the steam engine used to drive the timber mill was operational, and most buildings would not be completed until 1859. The last to be finished was the engineer store, in 1860.



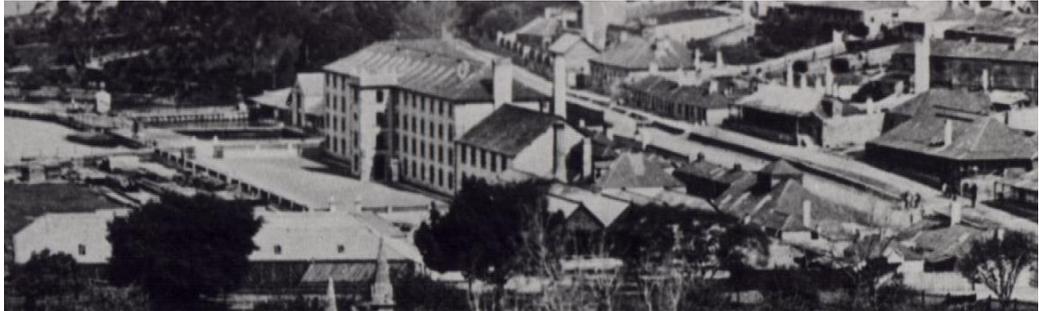
**Figure 33.** Site plan of the Penitentiary and new workshop complex, late 1850s. Note the surviving overseer’s quarters at the west end of the site. Covered saw pits were built on the north side of Settlement Creek (which had been covered over). (Archives Office of Tasmania, ref. PWD266-1-1775)

Instead of the previous collection of odd buildings, the new workshops were housed in two long buildings, ranged east-west. The front (north) building housed the saw mill, bone mill (of 1861, which ground bones for fertiliser), a boiler room to power them, a blacksmith’s and foundry, wood shed and engineers’ store.



**Figure 34.** Detail of a sketch of Port Arthur c1860s, retraced in 1917. It shows the Workshops Complex at the west end of the Penitentiary, as well as the covered sawpits on the north side of Settlement Creek. (Archives Office of Tasmania, ref. PWD266-1-1996)

From contemporary photographs, it appears that the blacksmiths' shop and bone mill have masonry walls, while the rest of the structures are timber. While the timber buildings have long, gabled roofs, the bone mill has an unusual hipped roof with a dormer window on the north side. This suggests that the bone mill installed 1861 displaced a steam-powered flour mill installed in 1858 in the workshop complex. The milling machinery would have been arranged vertically, requiring a loft such as this for grain storage and feeding into the mill. But there is conflicting information as to whether a steam-driven flour mill was ever realized here.<sup>66</sup>



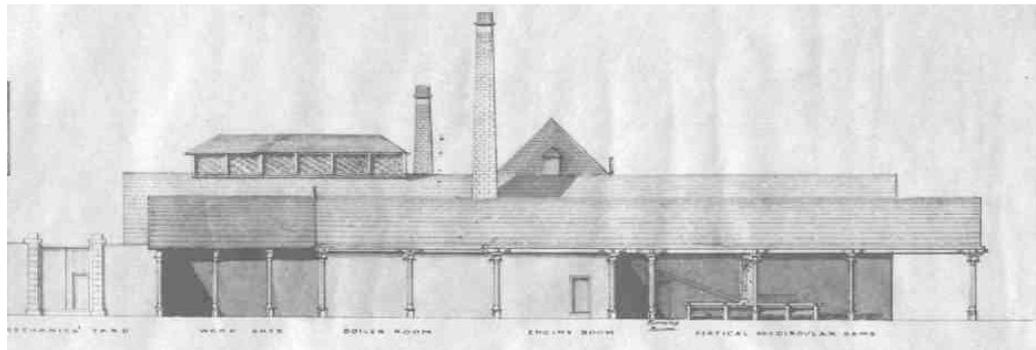
**Figure 35.** Detail of a view from Scorpion Rock, showing the side elevations of the workshop buildings (lower right) and the sawpits on the other side of Settlement Creek (lower left). (PAHSMA ref. 1518)

The first steam engine for the mills had 9 horsepower. It was initially maintained and operated by an engineer appointed to this task in 1861. Output was increased in 1863 with the installation of a second boiler for a new vertical saw frame. Once operational, the vertical saw could cut 25,000 linear feet of timber a week. Logs were delivered by the tramway from the bush to the sawmill, and then the sawn lumber transported onward to the wharf. Steam-powered sawpits were located in a building on the north side of Settlement Creek.

Improvements were made to the sawmill in August 1867, but it was out of commission early the following year because there was no engineer at Port Arthur who could carry out the necessary repairs. The mill was abandoned in 1874 or 1875, shortly before the convict settlement closed.<sup>67</sup>

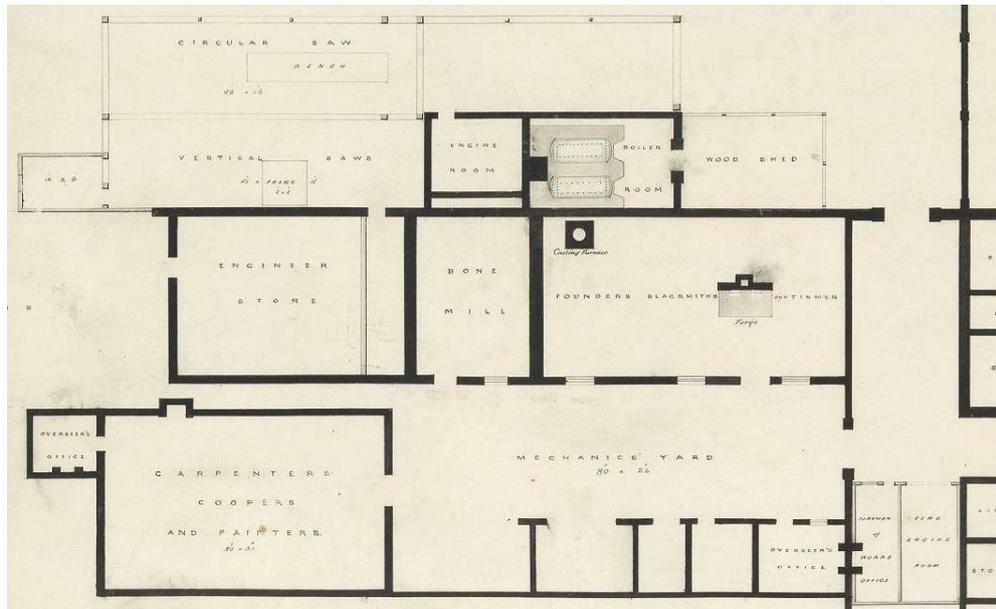
<sup>66</sup> PAHSMA, 'Penitentiary Workshops Archaeological Site Report', nd, p 35, quotes an account of the return for June 1858 referring to a flour mill 'being erected contiguous to the new steam engine'. Brand, Vol 4, p 61, however, cites a *proposal* in 1861 to increasing the power of the existing engine to grind flour.

<sup>67</sup> Brand, Vol 4, p 61.



**Figure 36.** North elevation of the Workshops Complex, c1864. Note the boiler chimneys to the steam-engines. (PAHSMA ref HB P No 1)

Behind the engine room was an open mechanics' yard, and then the other workshops building. It contained the carpenters, coopers and painters, and by the 1870s also basket-makers, clock-makers and wheelwrights. At the west end was an overseer's hut<sup>68</sup>



**Figure 37.** The new workshop complex, c1864. The sawmill (top two rows of rooms) contains spaces for a circular saw, a vertical saw, engine room, boiler room (with two boilers), and a wood shed. The central row contains an engine store, bone mill, and blacksmiths/foundry. The bottom row contains an overseer's office, carpenters', coopers' and painters' workshop, and a mechanics' yard with another overseer's office. In the space between the workshop complex and the Laundry (right) is the Foreman of Works' office and the fire engine room. (Archives Office of Tasmania, ref. PWD266-1-1779)

<sup>68</sup> Brand Papers, Vol 4, pp 61, 350. PAHSMA, 'Penitentiary workshops and ablutions: historical analysis', 2003.

### 2.3.8 *Life in the Penitentiary*

#### *Accommodation*

Living conditions in the Penitentiary differed greatly between the separate cells on the lower levels and the relative normality of the dormitories on the top level.

Convicts in heavy leg irons were assigned cells on the ground floor, while those in light irons occupied the cells accessed by the galleries. The convicts returned to their cells at the end of the work day and remained there for the night. The cells were tiny, with minimal furnishings: small built-in shelving and a stool. The convicts slept in sack-cloth hammock hung on wall hooks, with two blankets and a woollen rug each. Their only communication with others during the evening and night hours was by calling the warder with a bell mechanism.<sup>69</sup>

In the upstairs dormitories, conditions were also cramped, with the convicts accommodated in narrow sleeping cages, their heads to the wall. Every four months they were issued with clean bedding, but the mattresses and blankets were shaken and aired outside once a week in winter and twice during the summer.

During the night, the convicts were still under constant supervision. Lamps, suspended from the rafters, were left burning, and night Watchmen, Constables and Officers were left on duty.<sup>70</sup>

#### *After hours*

After their long working day, which ranged from 7.75 hours during the winter to 10.25 hours during the summer, broken only by an hour for mid-day dinner in the dining hall, the convicts returned to the Penitentiary. Saturdays they returned from work early, at 4 pm, for the weekly bath, and Sunday was a day of respite from work, though attendance at Chapel or Mass was compulsory (though Jews were excepted).

From 6.45 pm each evening, after supper and evening muster, classes were held in the dining hall for an hour and a half. There was a well-stocked library at one end of the mess hall, from which convicts were allowed to borrow a book a week. The adjacent schoolmaster's room was stocked with teaching aids such as maps and diagrams. The Evening Schoolmaster was a freeman, assisted by educated convict monitors. He was instructed to make the 'strictly secular' education 'as free from tedium and monotony as possible'.

Attendance was voluntary, though the Commandant had to grant permission to attend. Only about 10% of the convicts took up this opportunity to receive 'plain educational instruction' (reading, writing and arithmetic). They could also get pen

<sup>69</sup> Scripps, 'Interpretation Storyline, Precinct 1', 1997, pp 39-40.

<sup>70</sup> Convict Dept, *Regulations*, 1991, p 21, 27.

and paper from the schoolmaster to write letters, which were inspected prior to their posting.

The others spent their evenings in the exercise yards or the day room (created in 1862). They remained under supervision and subject to the edification of public readings 'whenever practicable'.<sup>71</sup>

## **2.4 Decline of the Penitentiary precinct**

### **2.4.1 End of penal function**

The 1850s was a time of growth for Port Arthur, as the Norfolk Island penal station closed and many convicts were relocated and most of the other probation stations were also closed. By 1857 Port Arthur was the only penal station left outside of Hobart and Launceston. This growth is reflected in the new accommodation in the Penitentiary, and new places of work for skilled convicts in the adjacent workshops. But the system overall was in decline, following the cessation of transportation to VDL in 1853, and Port Arthur's days were numbered.

In 1857 many invalid and pauper convicts were relocated from the Impression Bay penal station, and housed in the former Prisoners Barracks. One wing of the Separate Prison was blocked off and converted to house the insane. By 1867 the number of convicts had dropped to 496. Of them just 261 were classed as fit to work ('effectives'). Four years later the numbers had dropped to a total 283 convicts, of which 141 were effectives.

In the mid 1870s, the Penitentiary was almost empty. Just 56 of the 136 cells were regularly occupied, and the dormitory on the top floor was no longer used. Only four tables at one end of the huge mess hall were used for meals.

By 1877, Port Arthur had become too expensive to run. It housed just 64 convicts, as well as 205 invalids, paupers and lunatics. Long gone were the days of self-sufficiency and government profits on the back of convict labour. The government gave the order to close the penal station, taking whatever could be moved, but leaving the buildings basically intact.

The convicts and other inmates were moved to Hobart in April of that year, leaving a small crew to carry out the dismantling work. The clock was removed from the tower of the Penitentiary. The steam engines were taken from the workshops, as well as the timber tramways, and any other moveable items.<sup>72</sup>

<sup>71</sup> Scripps, 'Interpretation Storyline, Precinct 1', pp 23-24. Convict Dept, *Regulations*, 1991, pp 18-20, 43-44.

<sup>72</sup> Scripps, 'The Penitentiary', 1997, pp 23-24. Scripps, 'Interpretation Storyline, Precinct 1', p 41.

### **2.4.2 Sale of land and buildings**

It was not until 1889 that the government began to auction off the buildings of the former penal settlement. By that time the Penitentiary was reportedly in good condition, as the roof had been reshingled in 1873, but had some minor leaks. The timber lavatory sheds in the rear yard had collapsed some time earlier and had created a damp problem on the south wall. The blacksmiths' shop had reportedly been used by the residents of Carnarvon Township during the 1880s, but it was in poor condition. The workshop buildings were sold to one Joseph Danker for £60 and shortly dismantled, as a survey plan of that year shows the area vacant. The day room (former ablutions block) was still standing, as was the Penitentiary, the Laundry and the Bakehouse. It is surmised that the iron gates to the Parade Ground would have been removed in 1877, while the timber balustrade was sold off in 1893.<sup>73</sup>

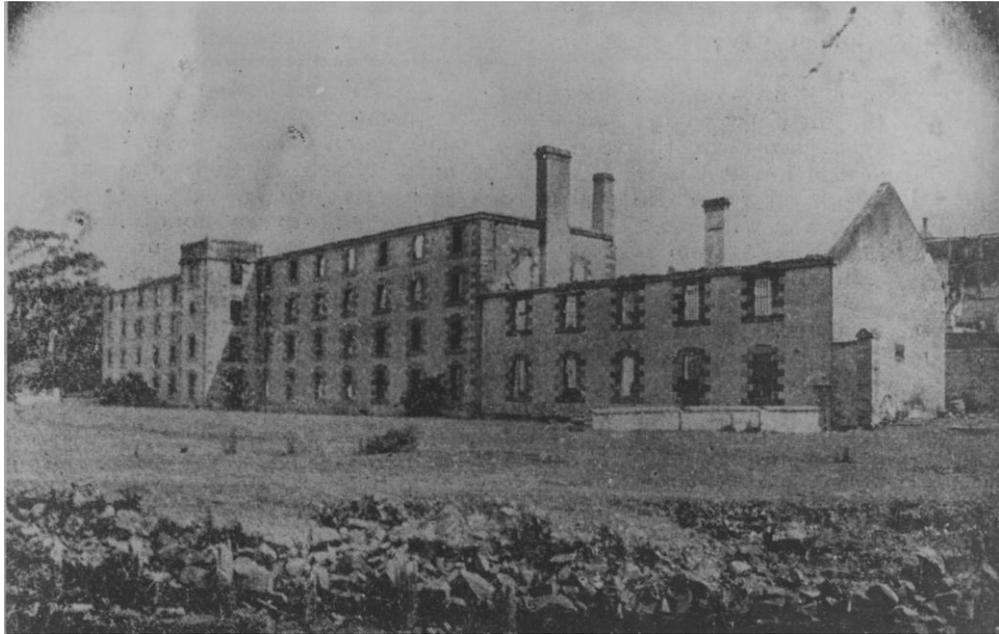
The Penitentiary, and presumably the adjacent Watchman's Quarters and Laundry, were put up to auction with a reserve of £800. At such a high price, it was passed in. The adjacent lot, where the workshops had been, was sold separately. By this time, the penal settlement had become a free township (with the first land sale in 1878) and renamed Carnarvon, to dissociate it from its unsavoury past. This was part of the opening up of the Tasman Peninsula to free settlement, when the former penal stations were adapted as new townships. Some of the convict-era buildings in Port Arthur were reused for new purposes (e.g., the former Asylum became the Carnarvon Town Hall), or quarried for their building materials.

An agreement was finally reached between Carnarvon Town Board and the Tasmanian Government in late 1897 to provide the Penitentiary to the town for 'recreational purposes' under a 99 year lease. One week later, on New Year's Eve, a massive bushfire swept through the Tasman Peninsula. In Carnarvon, the timber shingles of the Penitentiary were the first to catch alight. The building burned for two days. When it finished, the roof and timber floors had been consumed, and only the walls of the Penitentiary, Watchman's Quarters, Bakehouse and part of the Laundry remained.<sup>74</sup>

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<sup>73</sup> Brand Papers, Vol 3, p 287; Vol 4, p 61. PAHSMA, 'Penitentiary workshops and ablutions', 2003. Tuffin, 'Penitentiary Parade Ground: pictorial timeline', 2003.

<sup>74</sup> Brand Papers, Vol 2, pp 287-88.



**Figure 38.** Photo taken for the *Tasmanian Mail* just after the fire, January 1898 (PAHSMA ref 66-1032)

### **2.4.3 Public use and tourism**

Port Arthur attracted tourism from the wider Tasmanian and Australian public as soon as the penal settlement closed and public access was permitted. This had been preceded by visits starting in the 1840s from travellers interested in charitable and penal institutions who were able to obtain permission from the authorities. After closure, day-trippers began visiting from Hobart on steamers and it had become a substantial business by the mid-1880s.

Tourism to see the remains of the convict system contrasted with the day-to-day activity in the newly created township of Carnarvon, which sought to escape the 'stain' of the past with a new name and the refashioning of convict-era buildings for new purposes. This proved more difficult with ruins such as the Penitentiary, which could be seen as purely monuments to a distasteful past, as well as a safety hazard to residents. In the early 1910s, the Public Works Department permitted Carnarvon residents to purchase fallen bricks from the Penitentiary. In 1912 the local council proposed that it should be demolished due to its dangerous condition, allowing the remainder of the construction materials to be reused. The Public Works Department stepped in to halt these plans in 1913, and advised that only the most unstable parts of the Bakehouse be demolished, and that the piles of fallen bricks within the structure be removed (and sold). In response to safety concerns, the ground-floor windows were bricked up and a fence installed to prevent access to the rear yard and the doors.

The attraction and scenic value of the historic elements of the Port Arthur site was recognised in 1916, when it was gazetted by the Tasmanian Government

and placed under the control of the Scenery Preservation Board. The listing included the Penitentiary, the Church, the Separate Prison, Isle of the Dead and Point Puer. The Board then investigated the cost of making the buildings safe for visitors.

David Young (1996) states that it was public interest in the romantic ruins of the church that first impelled the state government to preserve Port Arthur. In 1913 architect Alexander North argued in favour of spending to stabilise the church as it was 'the central feature' of the visit of thousands of tourists annually. There was less interest at the time on spending a lesser sum on the Penitentiary as it had 'no artistic value', though North allowed that it could hold some historic interest. The Tasman Municipal Council understood the importance of the ruins of both the Church and Penitentiary to the economic fortunes of the area, and made the strategic move to request that the State take on the upkeep and control of the church and Penitentiary. This was to ensure that adequate funding could be found.

Tasmania's Scenery Preservation Board was created in 1915 in response to calls for a national park at Mt Field. The legislation creating it was based on New Zealand models, and was very progressive for Australia at the time. The SPB was charged with inspecting crown or private lands 'possessing scenic or historic interest' to see if they should be reserved. At their first meeting on 7 July 1916, the Board recommended a list of potential sites. On the Tasman Peninsula these included a number of natural features, as well as the Penitentiary, the Church, the Separate Prison, Isle of the Dead and Point Puer at Port Arthur. The SPB, however, declined to preserve any other convict-related buildings, apart from those on the Tasman Peninsula.

The value of tourist interest to the locals was formally recognised in 1927, when the town was renamed 'Port Arthur'. This coincided with the sale of John Beattie's convict-history collection to the Queen Victoria Museum, Launceston, in 1927, providing official recognition of the importance of this period of history. Young (1996) argues that this event, along with the international release of the film *For the Term of His Natural Life* that same year, 'hastened Tasmanians' acceptance of their convict past'.<sup>75</sup>

Many locals already benefited directly and indirectly from the tourist trade. The direct beneficiaries included those who provided accommodation (mostly in convict-era dwellings) and interpretation of the site. Among those who brought the history of Port Arthur to visitors was Bill Radcliffe. Radcliffe's house and shop were constructed at the west end of the workshops site around 1924. In the early 1930s he built a large timber shed to house his private museum, displaying curiosities dug up from Port Arthur, including the Penitentiary area. After his death in 1943, Radcliffe's widow moved the museum outside the historic site. The Radcliffe Collection was acquired by the Tasmanian Government in the 1970s and formed the basis of the Collections Program at

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<sup>75</sup> David Young. *Making Crime Pay*, 1996, pp 78-81, 88-90, 94-99.

PAHS. The buildings on the workshops site were demolished in 1959. The creek which runs next to the site was named after Radcliffe, as he had owned a large parcel of land around the creek. The Penitentiary, however, continued to face the threat of demolition, despite its gazettal. Another proposal was made in 1944 to replace the dangerous structures with a scale model housed in a small pavilion on its site.

In the 1950s the Scenery Preservation Board requested advice from the Public Works Department on preserving the structure. By the mid-1960s a budget of £4,000 a year was earmarked for the preservation of what was by then the centrepiece of Tasmania's best known tourist attraction. On this basis, part of the wall to the entrance hall was dismantled and reconstructed in 1965.<sup>76</sup> In 1967 the interior was cleared of rubble and the west end of the north wall (where it had earlier collapsed) was reconstructed. To differentiate the new work from the original, the reconstructed wall was only two bricks thick, whereas the originals were three bricks thick with brick veneers on both sides. This metal scaffolding was followed by the erection of buttressing in 1971.



**Figure 39.** View of the Watchmen's Quarters (far left) prior to reconstruction of the roof in 1959. (Archives Office of Tasmania, ref. AB713-1-4045)

Also in 1971 a caravan park, located on the former Parade Ground by the late 1950s, was removed. It had followed tennis courts, erected by 1930 at the east end of the Parade Ground. There had been complaints from day-trippers that the caravan park spoilt photos of the iconic ruin, though locals argued for its retention. The roof of the Watchmen's Quarters had been rebuilt and the interior refurbished for use as the caravan park ablutions block in 1959. The drinking fountain that had once stood on the Parade Ground was given back to the Tasman Council in 1949, but was relocated to its present spot upstream on Radcliffe Creek.<sup>77</sup>

<sup>76</sup> This may explain why there are quoins visible on the inside, but not the outside adjacent to the entrance porch.

<sup>77</sup> Brand Papers, Vol 2, p 289. Scripps, 'The Penitentiary', 1997, pp 26-27. PAHSMA, 'Penitentiary workshops and ablutions', 2003. Chin, 'Construction chronology', 2006, p 5.



**Figure 40.** The informal caravan park on the lawn before the Penitentiary, c1970. (State Library of Victoria, image H90.25/109)

## 2.5 Conservation of the Penitentiary precinct

### 2.5.1 Department of National Parks and Wildlife, 1971-June 1979

On 1 November 1971 responsibility for all the historic sites under the control of the Scenery Preservation Board was transferred to the Department of National Parks and Wildlife (DNPW). This included the Port Arthur Historic Site. While it was better funded than the SPB had been, it still did not have enough money to carry out all the pressing repair and stabilisation works at the former convict sites on the Tasman Peninsula.

The coming of DNPW management to Port Arthur was an improvement over the Scenic Preservation Board period, which was marked by unfinished works programs and a worsening state of many buildings. In line with a more systematic approach to conservation, a report on the *Conservation of Building Fabric and Restoration of the Penitentiary* was commissioned from architects Crawford de Bavay & Cripps in collaboration with Fowler, England & Newton and delivered in 1974. The two firms carried out a series of conservation reports for Port Arthur in the 1970s, looking at issues like the characteristics and condition of the Penitentiary's bricks and structure. In May 1978, a contract was signed for the installation of a free-standing timber walkway through the Penitentiary, designed by Crawford de Bavay & Cripps, but no actual conservation works are documented during this period.<sup>78</sup>

<sup>78</sup> Young, *Making Crime Pay*, pp 150, 142. Chin, 'Construction chronology', 2006, p 6.

The construction of the central walkway as an engineering and interpretive element was particularly creative. As an engineering solution, the walkway supported the four storey external walls and continues to be effective in that role three decades later.<sup>79</sup>

### **2.5.2 Port Arthur Conservation and Development Project, July 1979 – June 1986**

Enough money to finally act on the recommendations from the 1970s conservation reports finally appeared in July 1979, when the Port Arthur Conservation and Development Project (PACDP) was established. The federal and state governments provided funding of \$9 million for conservation and archaeological works at Port Arthur over seven years.<sup>80</sup>

On the basis of the reports, an extensive program of conservation works was carried out on the Penitentiary from December 1982, under the supervision of Crawford Cripps & Wegman (as the architectural firm was now known). The works were preceded by archaeological investigations, where appropriate. There were also emergency works to the small bridge linking the first floor of the Penitentiary with Champ Street, following a car accident in October 1981. The bridge was propped on top of a concrete pad, and a damaged pier was reconstructed. Tie rods were later inserted in them (in 1983) for further stabilisation.

Stage 1 of the works to the Penitentiary involved the stabilisation and consolidation of the walls, with particular attention to reinforcing and underpinning the tower on the north side. Works to the walls generally included the removal and refiring of about 600mm of bricks from the tops of walls as well as removal and resetting of the coping stones, cleaning out cracks and voids and then grouting, and the insertion of Hesbia tension bars into the bed joints in the lower sections of walls as well as general repairs to the brickwork and stonework in this area. The coping stones were limewashed after their reinstatement. Failed timber lintels were also replaced. Surviving timber windows were treated with a raw linseed oil and terepine mixture, and loose frames refixed and packed with bituthene mastic. The scope of Stage 1 also included the Bakehouse, where the bake ovens and chimneys were stabilised. Stage 1 works were complete in 1984.

Stage 2 of the works, which began in August 1983, focussed on the Bakehouse. Works included the reattachment of delaminated stone lintels, partial reconstruction of the bake ovens, grouting and pinning delaminated brick walls, rendering horizontal surfaces and patching window sills, and poulticing lower levels of the internal walls where they had been affected by accumulated rubble. General works to the tops of walls (including refiring bricks), cleaning and stabilisation were also carried out in a similar manner as in the Penitentiary.

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<sup>79</sup> Personal communication, Jo Lyngcoln, Conservation Manager, PAHSMA, 2011.  
<sup>80</sup> Young, *Making Crime Pay*, p 150.

A third stage was proposed, focussed on stabilisation of the cells in the Penitentiary, but it was not carried out at this time.<sup>81</sup>

The conservation methods used during the PACDP period, particularly at the Penitentiary, were innovative and influenced conservation practices across the country over many decades. Practices in structural and masonry stabilisation that were forged at the Penitentiary are still in use today.<sup>82</sup>

### **2.5.3 Port Arthur Historic Site Management Authority, from 1987**

At the end of the PACDP, there were still works required across the entire site with an estimated cost of in excess of \$7.7 million, including the Stage 3 works to the Penitentiary cells. The Federal Government refused to commit more money, calling the site a 'bottomless pit'. In response to these funding difficulties, in 1987 the Tasmanian Government transferred management of Port Arthur from the Department of Parks and Wildlife to the newly created Port Arthur Historic Site Management Authority (PAHSMA). PAHSMA was authorised to start charging an admission fee to the site, and in 1991-92 the site made a profit for the first time.<sup>83</sup>

There was another pause in the frenetic works program at the Penitentiary in the early days of PAHSMA, which allowed time for the production of more investigative reports. The reports, produced by a variety of architectural and engineering firms between 1989 and 1993, drew attention to the continuing structural problems of the Bakehouse, deterioration of the cells, and delamination of the inner skin of bricks of the Penitentiary.

Works began again in 1993, with stabilisation of the Bakehouse ovens and a new sandstone lintel to the eastern oven opening. In the Penitentiary, the ground and first-floor windows in the north-west corner were reconstructed, along with general works to window lintels.

There were serious concerns about the leaning north wall of the Bakehouse, and underpinning was proposed. It was first believed that the wall was rotating due to the rotting of the large logs which served as the footings. Archaeological investigation in 1996 determined that the logs were still in remarkably good condition, apart from minor rotting at the end. So instead of entirely replacing the logs, the rotted areas were removed and the resulting gaps packed with concrete. The following year the walls linking the Bakehouse and the remains of the laundry were partially reconstructed (above exposed steel lintels) in a further attempt to stabilise the Bakehouse (this area is referred to as the Wash House Loading Bay). Oven lintels were replaced or reset, along with general repair works.

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<sup>81</sup> Chin, 'Construction chronology', 2006, pp 6-21.

<sup>82</sup> Personal comment, Jo Lyngcoln, Conservation Manager, PAHSMA, 2011.

<sup>83</sup> Young, *Making Crime Pay*, p 150.

In 1997-98 there was a continuation of the repair work to delaminated areas of bricks in the Penitentiary walls, as well as removal and relaying of the uppermost courses. These maintenance works were then carried out in a cyclical fashion. After repairs in 2004, the treated areas were coated with orange-tinted limewash to match the original. Original metalwork – the Penitentiary window bars and the bake oven door surrounds were also conserved and given protective treatments in 2003 and 2000, respectively.

There were also ongoing concerns at this time about the safety and ongoing effectiveness of the combined visitors' walkway / structural bracing structure inside the Penitentiary. There were regular calls for its replacement.

In 1995, the pillars of the gateway leading into the yard of the Watchman's Quarters had been replaced with replicas.<sup>84</sup>

Between 1994 and present day a series of engineering surveys have been carried out including a regular series of structural monitoring reports between 1994 and 1999 by Thompson and Brett Pty Ltd. In 2009 a Structural Appraisal of the Penitentiary Precinct was prepared by GHD. The report was based on site inspections and analysis of the Laser Scan of the Penitentiary Precinct structures by SKM in 2008, as well as other engineering reports from the past. The findings indicated that apart from localised wall movement and material deterioration the majority of the structure is sound. The Bakehouse walls have shown greatly reduced movement since underpinning work in 1996, however, it is recommended that a form of tie-back system be incorporated into the new walkway system when constructed. The walkway was identified as requiring some minor work, such as catch-up maintenance which has since been carried out. PAHSMA is continuing to monitor the structure. At the time of this report the Bakehouse north wall and the east gable wall have been laser scanned for comparative analysis with the 2008 scan to ascertain the need for temporary bracing.

Stabilisation of perimeter walls was carried out over the 2010/11 period. The internal and external faces of the walls were scaffolded in a staged program of masonry/plaster/timber conservation work. Sandstone capping stones were replaced where missing to prevent further weather impacts. Features such as capping stones at height left in rotated positions that contributed to deterioration of surrounding fabric have been corrected in alignment and fixed in position.<sup>85</sup>

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<sup>84</sup> Chin, 'Construction chronology', 2006, pp 21-40.

<sup>85</sup> Personal communication, Jo Lyngcoln, Conservation Manager, PAHSMA, 2011.

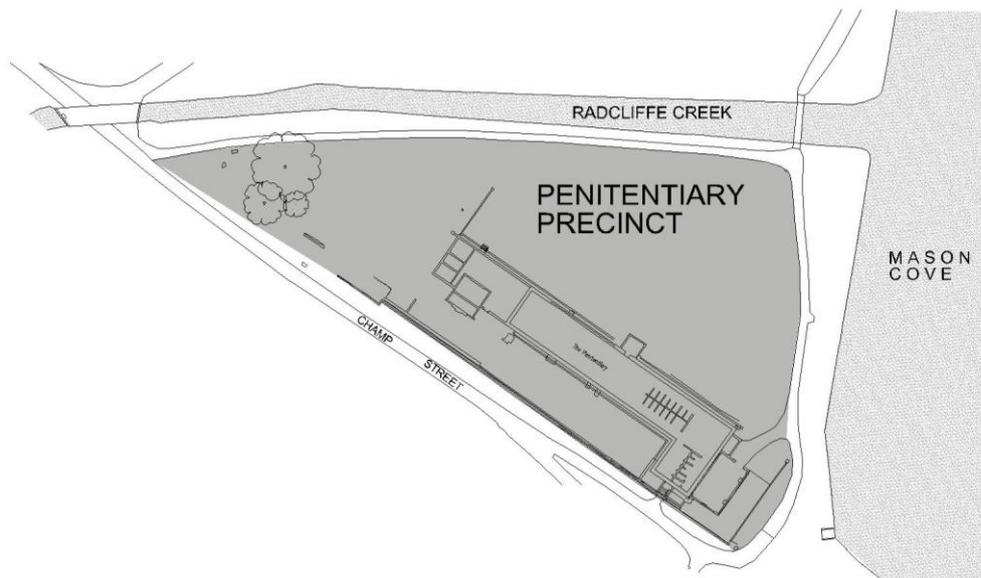
### 3.0 DESCRIPTION

This section of the CMP is intended to provide a descriptive record of the physical elements of the site at the time of writing this report. Further detail on the historic development of the physical fabric is provided in Section 2.0 History and a discussion on the operational function of the precinct is provided in Section 4.0 Analysis.

#### 3.1 The Precinct

The Penitentiary precinct is located on the edge of Mason Cove in the heart of the Port Arthur Historic Site. The precinct is a focal point for the whole site and includes the ruins of the largest individual structure built on the site. The image of the Penitentiary and Bakehouse/Laundry ruin has become an iconic representation of the Port Arthur Historic Site.

The precinct is bounded by a gravel path to the north, east and west and the stone retaining wall along Champ St to the south.



**Figure 41.** The Penitentiary precinct is the grey area. (Not to scale)

#### 3.2 Landscape

The current landscape setting of the precinct is notably different to what it was like when the granary and flour mill was constructed in the early 1840s and during the 1850s when converted to the penitentiary. This is partially due to the physical change to the site that occurred in the 1850s when land was reclaimed in front of the building and the sea wall constructed, but also as a result of the surrounding industrial infrastructure of workshops, sheds, lumber yards and tramway being no longer extant.



**Figure 42.** *The Penitentiary and Bakehouse building and the fenced parade ground. Note the covered Settlement (Radcliffe) Creek in the mid foreground. [source: <http://catalogue.statelibrary.tas.gov.au/item/?id=626920>]*



**Figure 43.** *Looking towards the Penitentiary precinct from the northwest [authors 2011]*

The ground is relatively flat to the north, east and west of the precinct ruins, rising gently to the southern edge at the base of the masonry retaining wall to Champ Street. The stone retaining wall behind the penitentiary building aligns

with the edge of Champ Street and is approximately 3 metres high. The penitentiary/bakehouse ruins and the watchmen's quarters are located in a clear grassed area bounded by the gravel paths to the north, east and west and stone wall on the southern side. Other than grassed areas, the only vegetation within the precinct is the three trees at the western end adjacent to the creek.



**Figure 44.** View along the northern path of the Penitentiary precinct towards the trees at the west end. [authors 2010]

During the penitentiary period of occupation of the buildings, the external space, which is now open grassed land, was a series of controlled and defined spaces. On the northern side of the penitentiary building was the parade ground (with tramway running through it) enclosed by a masonry fence and beyond that, there was a fenced area for the storage of timber and goods awaiting shipping. At the west end there were the workshops and associated lumber yards which is now a clear grassed area. Despite this area having no building fabric remaining it is considered to have rich archaeological potential beyond the investigations that have already been undertaken. As such, protection of the subsurface material is important.

Within the precinct landscape there are elements which have been introduced during the tourism phase of the twentieth century. These items, include a stone monument commemorating the inauguration of the Port Arthur Conservation

and Development Project of 1982, a timber seat at the west end of the precinct and interpretation signage in various locations. These are minor elements in the landscape and are generally visually discrete.



**Figure 45.** View of the Penitentiary building and the reclaimed land in front of the building. [authors 2011]



**Figure 46.** View of the west end of the Bakehouse building and a section of the parade ground masonry fence. [authors 2010]

The landscape and seascape views to and from the Penitentiary precinct are highly evocative. The sense of isolation and the enormity of the working penal station of the nineteenth century can be appreciated when viewing the precinct from Mason Cove. The Penitentiary ruin is the visual focal point in the centre of the site, surrounded by other buildings and ruins of the same period and the heavily wooded hills as the backdrop. This view gives a strong sense of what the convicts faced when arriving by sea. The scale and landmark quality of the penitentiary ruins is further emphasised by the flat grassed land between the ruins and the water.



**Figure 47.** View to the Penitentiary precinct from the water of Mason Cove. [authors 2011]



**Figure 48.** View from the Penitentiary precinct looking out to Mason Cove. [authors 2010]

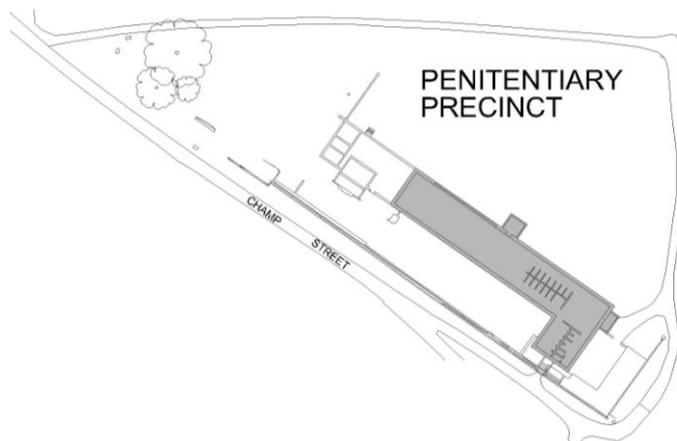
As a tourism site, the visitor experience beyond the Visitors Centre begins with a view down the side of the hill to Mason Cove and to the Penitentiary precinct. As such, this view to the penitentiary precinct provides the visitor with one of their first impressions of the site as a whole.

Views from the Penitentiary precinct are equally engaging, with the buildings and ruins visible in an arc around the southern side of the penitentiary ruins and the hills behind. There are also expansive views to the north and east to Mason Cove and Point Puer.

### 3.3 Buildings and Structures

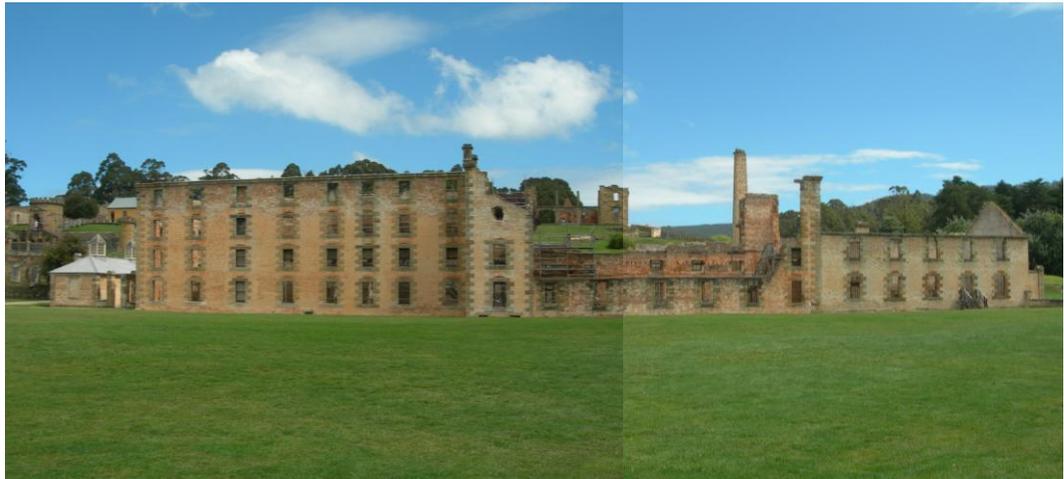
Within the Penitentiary precinct is the Watchman's Quarters and the ruins of the Penitentiary and Bakehouse buildings. In addition to these structures, there are remnants of the ablutions areas and a number of masonry walls, such as the retaining wall abutting Champ Street, the pillars and gateway adjacent to the Watchman's Quarters and remnant sections of the parade ground wall. The following sections provide a record of these buildings and structures as they exist in 2010 as well as providing some historical details that place the building fabric in context. Reference should also be made to Section 2.0 History for greater detail.

#### 3.3.1 Penitentiary Ruin



**Figure 49.** Penitentiary precinct key map – grey area is the extent of penitentiary ruin [authors 2010]

The Penitentiary structure is essentially a ruin of the converted granary and flour mill building. Therefore, it consists of building fabric from the two major phases of development: firstly the flour mill and granary of 1842-5 and secondly the penitentiary conversion phase of 1853-7. An additional layer of extant building fabric relates to the various conservation projects undertaken during the 20th and into 21st century. The modern layer includes building fabric conservation works as well as tourism infrastructure such as the walkway, ramps and interpretation signage.



**Figure 50.** View of the north elevation of the Penitentiary ruin [authors 2011]

Despite being a ruin with no roof, the original form and scale of the building is readily discernible. The four storey, sixteen bay granary and flour mill footprint remains intact, even though some walling, particularly to the west of the tower, is no longer extant.

The majority of the exterior walls, door and window openings date from the granary/mill phase of construction (1842-5). However, the alterations made during the penitentiary conversion (1853-7) are visible in the existing fabric. On the northern facade, the third bay of windows (starting from the east end) and the surrounding masonry replaced the loading bay of the granary/mill. As noted in Section 2 History, the bricks of the penitentiary conversion phase are of a slightly different colour to the original bricks and therefore these changes are easily discernible.

Further along the northern facade, the sixth bay of windows is also from the penitentiary conversion phase replacing the full height break in the facade to accommodate the waterwheel.

Slightly off centre in the northern facade is the ruin of the clock tower, also constructed during the penitentiary conversion phase. The tower not only housed the clock (external face) but provided an additional access stair connecting each level. The even number of bays and the adaptation of one of the windows to provide the access between the existing structure and the new tower resulted in the slight asymmetry to the north elevation. The materials and form of the tower followed the existing granary/mill building being of locally made bricks with stone dressings including quoins and voussiors. Parts of the existing tower ruin are reconstructions and the original tabilizat parapet no longer exists. Further west along the northern facade remains a section of wall which is only 2 storeys high. This section had substantially collapsed following the fire and was further removed during the mid twentieth century to gain access to clear the interior rubble and was then reconstructed.



**Figure 51.** View of the tower (left image) and the east wall of the Penitentiary ruin (right) [authors 2011]

The existing window openings in the north, south and east elevations of the penitentiary building provide further evidence of the changes made to the structure when converted. While the external appearance of the window openings remained essentially the same as constructed, ie. Ground floor windows slightly larger (vertically) than the upper three levels with stone sills, lintels and quoining, close examination provides clues to the changes. The original windows were timber framed, Georgian multi-paned sashes as can be seen in a couple of the windows in the south elevation. The conversion works required the top level of windows to be bricked in (dormitory level) and metal bars added to all windows.



**Figure 52.** View of a southern window with timber framed window, masonry infill behind and metal bars in front (left image) and general view of the south wall of the Penitentiary ruin (right image) [authors 2010]

The legibility of the interior of the converted penitentiary building is less discernible than the exterior. The understanding of the remaining ruins and the internal layout of the large structure is very difficult and further confused by the orthogonal and visually intrusive form of the structural bracing and walkway construction. There are no internal floors remaining (other than at ground

level). The history (refer Section 2) notes that during the granary/mill phase, this building had differing floor levels in the different functional spaces internally, including a number of double height spaces.



**Figure 53.** View of the southern wing at the east end of the Penitentiary ruin (left image) and general view of the southern elevation of the Penitentiary ruin (right image) [authors 2010]

When converted to the penitentiary, the floor levels were changed to be consistent across the interior, although at different levels to those during the granary/mill use. With no upper floors remaining and the internal walls partially ruined, the internal surface of the external walls where floor levels were keyed into the brickwork provide the only reference to the actual floor levels.



**Figure 54.** View of the remains of a number of cells with the foul air egress vent in the rear wall [authors 2010]



**Figure 55.** Interior view of the Penitentiary ruin structural stabilization infrastructure and walkway. [authors 2010]

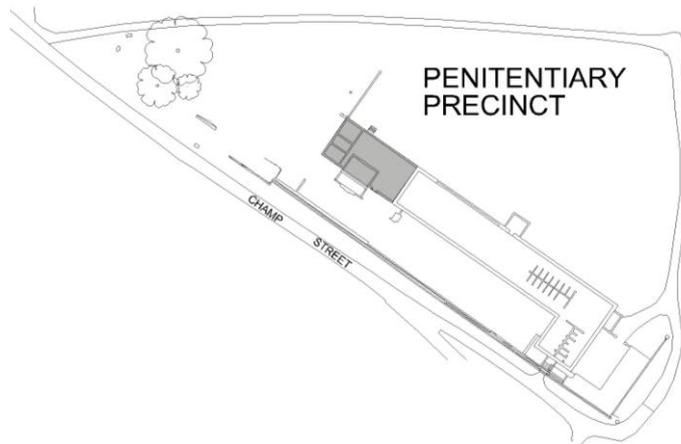
Remnants of internal cell walls remain including some of the fixtures within the cells such as the shelving and bolt fixings for the hammock bedding. As can be seen in Figure 54, the rear wall of the cells included a perforated mesh cover to an extensive ducting system along the length of the building emitting foul air from the cells out through a chimney at the west end of the building.

Internally, there is no building fabric which clearly denotes the function of some of the spaces. For instance, the third level dining hall, dormitory in the top floor and the chapel in the south east return section of the building are known to have existed, but there is limited physical evidence of these spaces. Remnants of internal finishes remain in scattered sections throughout the building.



**Figure 56.** View of the walkway in the Penitentiary ruin [authors 2010]

### 3.3.2 Bakehouse Ruin



**Figure 57.** Penitentiary precinct key map – grey area is the extent of bakehouse ruin [authors 2010]

The two-storey Bakehouse/kitchen building was constructed in 1858. The two-storey, gable-roof structure was attached to the west end of the Penitentiary. Like the rest of the building, it had brick walls with stone quoins to the windows and corners, and a timber shingled roof. The size, form and location of the northern windows continued the rhythm established in the original granary/mill structure – including the steel bars over the windows.



**Figure 58.** North elevation of the Bakehouse/Kitchen (left) and the west end wall of the Bakehouse/Kitchen (right) [authors 2010]

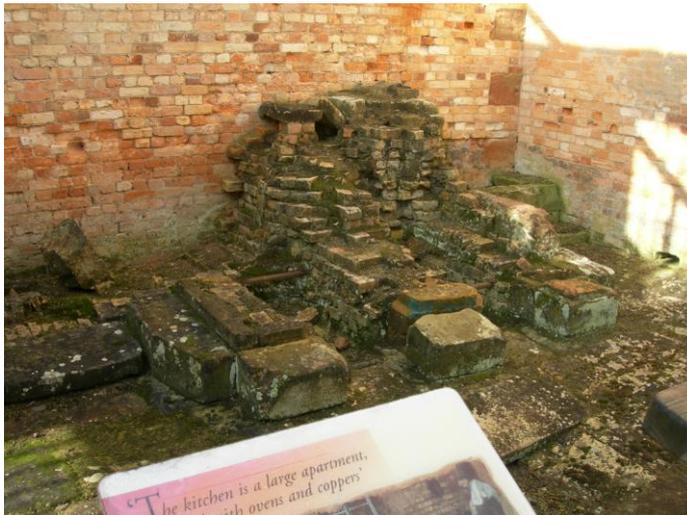
The ground floor consisted of storage areas and a scullery at the west end, with the remaining floor area dedicated to food preparation. This included a large bank of ovens on the south wall, and ablutions facilities created in the rear yard.

The fire of 1897 resulted in the roof structure being completely destroyed and the bulk of the interior gutted. The perimeter walls remain relatively intact, though the west wall has been reconstructed. Some of the internal walls remain partially intact. The poor quality of the bricks (as discussed in Section 2

History) is clearly evident in the external walls where exfoliation of brickwork has resulted in a mottled finish. The deterioration of the stone base, which has been the subject of structural study and conservation works in recent times is believed to result from the poor foundation conditions, proximity to the cove and water table levels.



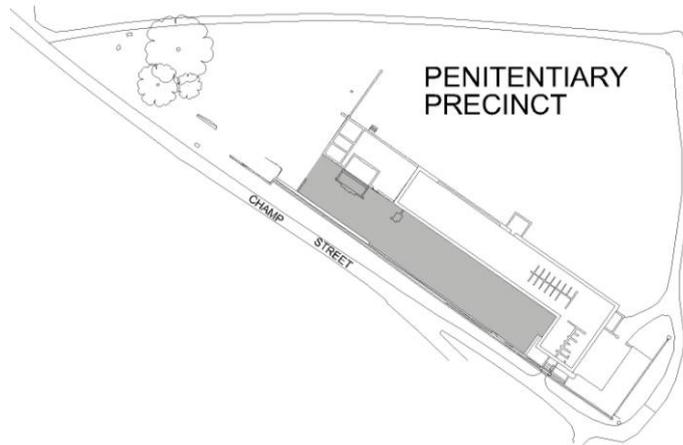
**Figure 59.** South wall of the Bakehouse with laundry adjacent [authors 2010]



**Figure 60.** Interior view of the Bakehouse (right) [authors 2010]

The interior of the bakehouse/kitchen ruin retains sections of flagstones to the floor. The extent of the flagstones is not clear due partially to the rubble debris, the build-up of earth and the installation of the walkway over the flooring. It is assumed that the internal walls were originally hardplastered although no evidence of such remains. The remaining building fabric of this section of the ruin does not present the visitor with many indicators as to the original function of the space, therefore interpretation is necessary to augment the viewers' understanding of this area.

**3.3.3 Ablutions area**



**Figure 61.** Penitentiary precinct key map – grey area is the extent of ablutions area [authors 2010]

An ablutions area, including a laundry, was created at the rear of the penitentiary building, between the south elevation and the retaining wall to Champ Street. It was completed by 1857.

There is no building fabric associated with the ablutions remaining and the area where they did exist is now open lawn. Markings in the rear wall of the penitentiary building and the Champ Street retaining wall provide evidence of the abluion structures that no longer exist.



**Figure 62.** Views of the abluion area behind the converted penitentiary [authors 2010]

Despite this area having no building fabric remaining it is considered to have rich archaeological potential beyond the investigations that have already been undertaken. As such, protection of the subsurface material is important. At the western end of the ablutions area is the remains of the laundry which was

constructed as an attachment to the rear of the bakehouse/kitchen. The large brick chimney associated with the boiler room remains as do parts of the masonry walls of the laundry. The actual layout of the space and the evidence of location of windows and doors is confusing which may be due to changes made to the structure sometime after its original construction in 1858.

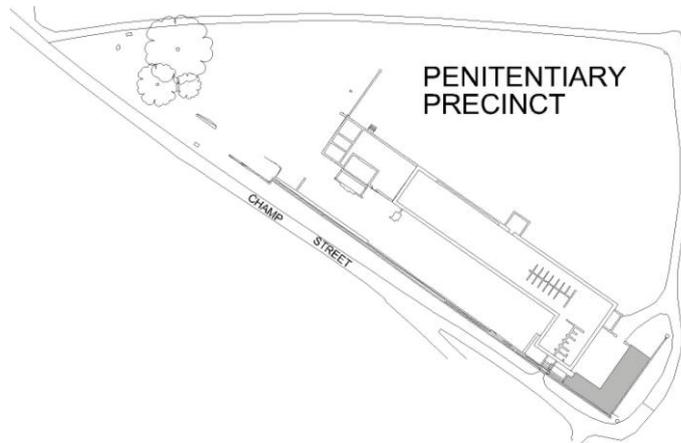


**Figure 63.** View of the boiler chimney [authors 2010]



**Figure 64.** View of the laundry ruin [authors 2010]

### 3.3.4 Watchman's Quarters



**Figure 65.** Penitentiary precinct key map – grey area is the extent of Watchman's Quarters [authors 2010]

The Watchman's Quarters, which is also known as the Constable's and Watchman's Barracks, was constructed adjacent to the east end of the converted penitentiary building. The L shaped Watchman's Quarters and the Penitentiary building are separated by a small courtyard which is enclosed to the north by a fence and gateway.



**Figure 66.** North façade of the Watchmen's Quarters [authors 2010]

Prior to its completion in mid 1858, the constables and watchmen had been housed in the penitentiary building. The Watchman's Quarters is a relatively small, single storey L shaped building constructed of brick with a stone base, stone quoins, sills and lintels in a similar style to the converted penitentiary and bakehouse/kitchen buildings. The hip roof, which was originally clad with timber shingles is surmounted by two timber lanterns.

This structure is the only one in the precinct where extensive reconstruction (primarily the roof and lanterns and internal elements) has been undertaken

resulting in an intact building, as opposed to the ruins adjacent. The reconstructed roof is clad in corrugated galvanized iron.



**Figure 67.** South west corner of the Watchman's Quarters [authors 2010]

The building consists of four main rooms. The two larger rooms in the north-south wing housed the watchmen in one, and the other, berths for constables and mechanics. The small east west wing at the south end, abutting the Champ Street retaining wall, had a room for the Senior Constable and a cookhouse. Each of these four main rooms is accessed from external doors into the courtyard.

Beyond the cookhouse, tucked behind the south wall of the Penitentiary (and sheltered beneath the Champ Street bridge) was a woodshed, wash house, urinals and privies. These ablution facilities no longer exist and a modern brick power substation has been constructed under the Champ Street bridge.



**Figure 68.** Senior Constables Room (left door) and cookhouse [authors 2010]

### 3.3.5 Masonry walls and stone remnants

Throughout the Penitentiary precinct there are a number of stone walls, fences and remnants of space defining elements such as the perimeter of the parade ground on the northern side of the penitentiary building.



**Figure 69.** A section of the Champ Street retaining wall [authors 2010]

The southern boundary of the Penitentiary precinct is defined by the extensive stone and brick retaining wall which aligns with Champ Street. The retaining wall is over 3 metres in height in sections, has a stepped capping of rendered brickwork with a rounded profile in some parts and triangular in others.

The primary function of the wall is retaining however, it also formed a demarcation line between the convicts on the lower ground and the administrators on higher ground overlooking them. The retaining wall also functioned as the southern wall of the ablution facilities during the penitentiary period and it retains evidence of where walls and roof structures connected into it.

Towards the eastern end of the retaining wall is a large stone pier, one of the few remaining elements pertaining specifically to the granary flour mill phase. The pier supported the flume structure which provided water to the flourmill wheel.

At the western end of the retaining wall, the return section which would have contained the ablutions area, linking into the south west corner of the laundry no longer exists. The retaining wall along Champ Street reduces in height at this point which would have been the rear section of the workshops and timber yards.



**Figure 70.** Stone pier which originally supported the water wheel flume [authors 2010]



**Figure 71.** Views of the Champ Street retaining wall [authors 2010]

Originally, in front of the converted Penitentiary and Bakehouse/kitchen buildings, was a parade ground defined by a masonry fence (refer to Section 2 History for detail of the parade ground). The only remains of this extensive masonry fencing is a small section at the west end of the Bakehouse – part of which is a reconstruction. The original fence was an elaborate series of masonry pillars and low masonry wall sections with timber pickets above between the pillars.



**Figure 72.** The remaining section and reconstructed pillar of the parade ground fence [authors 2010]

Centrally located in the northern fence of the parade ground was an elaborate masonry water fountain that was intended to keep the working prisoners hydrated. The fountain was removed some time after the decommissioning of the penal station. It was returned to Port Arthur last century and relocated to an open area to the west of the Penitentiary precinct.



**Figure 73.** The parade ground fountain in current location outside the precinct (left) [authors 2010] and the fountain in original location within the parade ground fence [source: <http://catalogue.statelibrary.tas.gov.au/item/?id=201286>]

Other stone and masonry wall remnants include the reconstructed masonry pillars and ironwork entrance gates to the Watchmen's Quarters courtyard adjacent to the converted penitentiary building.



**Figure 74.** The reconstructed stone pillars and iron railing to the Watchmen's Quarters courtyard [authors 2010]

At the west end of the Bakehouse/Kitchen is a section of the masonry wall and gate structure that provided access into the workshops yard. The remaining stone pillar has some of the original ironmongery from the gates intact.



**Figure 75.** Section of masonry wall and stone pillar originally providing access to the workshops yard [authors 2010]

### 3.4 Archaeological Elements

The Penitentiary precinct lies at the heart of the Mason Cove penal settlement. Its above- and below-ground archaeological material bears testament to the development of Port Arthur's dual focus on incarceration and industrial production from its earliest beginnings through to its final abandonment. Following the penal period the area became a focus for tourist activity, initially in the Carnarvon period and later as Port Arthur developed into one of Australia's premier heritage tourism sites.

All phases of activity in this precinct have contributed to the very significant material record of Port Arthur's history. This record consists of landscape modifications, structural remains – both as standing elements and as archaeological features - and their associated artefacts, and a series of complex spatial and temporal contexts that are currently poorly understood. Archaeological research to date has indicated that the precinct exhibits, in places, both stratigraphically complicated and intact deposits.

Archaeological investigations of subsurface remains and standing architectural fabric within the granary/ penitentiary precinct began in 1976. Since then, some 21 projects involving over 76 archaeological trenches have been carried out (see Table 1 and Figure 1). A substantial number of these projects have involved the monitoring of minor works projects or testing and data recovery investigations in the context of larger development projects such as the installation of walkways and services. However, several investigations, notably those of McIlroy (1989) in the Watchman's Quarters, Jackman and Tuffin's (2004, 2005) excavations of the ablutions and workshops areas, and Steele's (2004) investigation of the Parade Ground, were primarily directed towards the resolution of specific research questions. Investigations of standing fabric have included a photogrammetrical recording of building interiors in 1990, an analysis of original wall and paint finishes (Jackman 1998), and a preliminary analysis of standing fabric relating to the conversion of the granary into the penitentiary (Jackman 2009).

The ablutions, workshops and parade ground areas of the granary/penitentiary precinct have been the site of geophysical investigations in 2001 and 2004 (see Table 2 and Figure 2). These investigations provided data that, in part, was subsequently tested by archaeological investigation (Jackman and Tuffin 2004, Steele 2004). A restricted trial of ground-penetrating radar in the interior of the building was undertaken in 2011 but the results are not yet available (Gibbs and Roe, in prep.). The courtyard of the Watchman's Quarters has yet to be geophysically investigated.

While archaeological investigations within the granary/penitentiary precinct to date have demonstrated the research potential of its subsurface remains, the major contribution of these investigations so far has been to further characterize the structure, fabric and spatial configuration of the granary/penitentiary building and its annexes. These findings relate to the process of foreshore reclamation, the character of building footings, the nature of flooring during the granary and

penitentiary phases, structural sequences in the workshops and ablutions areas, and the configuration of drainage systems. Jackman and Tuffin's (2004) detailed excavations of the ablutions area produced rare artefact material associated with the convict population that demonstrates the ability of the archaeological resources to illuminate the largely undocumented lived experience of convict inhabitants.

#### **3.4.1 Parade Ground**

Steele's investigations of the parade ground area and the results of geophysical survey has demonstrated the below-surface presence of the parade ground retaining wall, drinking fountain foundations and area surfaces and wall alignments. While the artefactual material of this area is likely to be restricted the evidence of structural elements and spaces is important to the understanding of control systems. It is likely also that this area will contain evidence of structures – e.g. the tramway – associated with the adjacent wharf areas.

#### **3.4.2 The Penitentiary Building**

Unsurprisingly the main penitentiary building has yielded little in the way of artefactual material from the somewhat limited excavations that have taken place within it. However, the various excavations have yielded important structural information which, when 'read' in conjunction with evidence preserved in the remaining standing elements, is a critical resource for the understanding of the building complex and the different roles which it has played throughout the penal station's history. There is good reason to believe that further investigations, including high-resolution geophysical surveys, will provide greater definition of the structure's history including the little-known granary/mill phase.

#### **3.4.3 Ablutions Area**

No standing structures, with the exception of the Champ Street retaining wall, survive to indicate the layout of the ablutions area to the southwest of the penitentiary building. Excavations by Tuffin and Jackman have demonstrated the very high potential of this area to provide information on the changing structural configurations of this area and of the convict material culture and behaviours associated with them. The sub-surface deposits exhibit a degree of intactness and complexity that lend them to more detailed studies, especially those which seek to integrate that area's sequences with those of the main penitentiary building and the workshops areas to the northwest.

#### **3.4.4 The Workshops**

Industrial production of goods and materials by various trades has been a feature of this part of the Port Arthur site from its earliest days. Excavations of the workshops area has indicated that substantial evidence still remains from these activities. This evidence is comprised of both structural sequences of

buildings and spaces and of material culture elements that speak eloquently to the industrial focus of this part of the penal station. Indeed, many building elements and fixtures at the Port Arthur site were manufactured in these workshops.

### **3.4.5 Conclusion**

Each of these areas considered separately has features and deposits of high archaeological value. However, it is, in large part, the inter-relationships of these areas that render the precinct of incomparable archaeological value. While the number of research questions that could be asked of these resources is essentially infinite, some obvious themes might be addressed: for example, the tensions between punishment and production; control and reform; landscape and surveillance; and the material culture of convicts. As one of the strengths of the archaeological research approach is through comparative studies, the archaeology of the penitentiary precinct also has a very important role to play in studies that go beyond the Port Arthur site's boundary. Investigations of the penal system and changes to it at regional, national and international scales could be considerably advanced through a comparative and multi-disciplinary approach that included studies of the penitentiary precinct deposits.

## 4.0 ANALYSIS

### 4.1 Cultural Landscape

While the following section has drawn upon the 2002 Landscape Management Plan by Context Pty Ltd, it is acknowledged that this is under review. Hence the approach taken incorporates more recent understandings of landscape, as well as the site investigations by the current authors.

Rather than defining a landscape in its material sense there is value in using the concept of 'cultural landscape' as a way of perceiving and understanding, which allows for the idea that landscapes are not just comprised of material elements but also of experiences, uses and perceptions. Landscapes can tell multiple stories and allow for different understandings of those stories. The other usefulness of landscapes is that they can represent temporal change in terms of both their physical and symbolic aspects. Landscapes are dynamic entities and can be interpreted differently depending on cultural, political, social and economic perspectives.

The above approaches are relevant in our consideration of the Penitentiary precinct as they allow a way of viewing and interpreting what we 'see' today in the context of evolving uses of and engagements with the study area, and also of the way in which the precinct contributes to the broader Port Arthur landscape. The Port Arthur Historic Site is widely recognised as a cultural landscape of great significance, with the Penitentiary precinct as one of its major focal points. This focus is multi-layered and transects historical, architectural, aesthetic and symbolic boundaries. Clearly the meanings of the precinct to a convict Penitentiary inmate and to a visitor today are poles apart, however the significance of those engagements in terms of the experience of Port Arthur can be considered to be equally powerful.

The cultural landscape of the Penitentiary precinct embodies layers of meaning created throughout its natural and human history. Some of these layers are more significant than others, and some are more visible than others.

The following physical elements are significant components of the Penitentiary precinct cultural landscape, discussed in roughly chronological order of their formation.

Vistas from the precinct are of Mason Cove and the harbour of Port Arthur and the hills enclosing it on three sides. During the convict period, the lower slopes of the hills were cleared of timber for export and local use, but have been re-forested during the 20th century. The hills to the south of the precinct were terraced during the convict period to create flat spaces for buildings and roads. This includes the construction of a sandstone retaining wall which separates the precinct from Champ Road. While the land at the west end of the precinct, where the Workshop Complex once stood, gently slopes down from the south, most of the precinct is quite flat. This is because most of it stands on land reclaimed during the 1850s. At this time the outlet of Settlement (now Radcliffe)

Creek was moved from where it now crosses Champ Street to its present location in the sea wall. The creek was lined with sandstone blocks where it passed through the reclaimed area. The creek was then covered over with planks (now gone) so it did not serve as an impediment to the industrial uses, such as sawmilling, located in this area. The creek serves as the northern boundary to the precinct, and is once again an important visual element in this part of the Historic Site.

Even though it was considered a physical impediment to the use of land fronting Masons Cove, the creek still played an important role in the life of the penal colony. The availability of fresh water was an important factor in the choice of Port Arthur for a settlement. Its relative location within the settlement also influenced the siting of the Flour Mill and Granary in the 1840s. The creek's flow was divided upstream and a reservoir created at the top of Settlement Hill, to the south of the precinct. The water from the reservoir then flowed down the hill to power the waterwheel at its base.

While the creek was effectively rubbed out as an edge during the second half of the convict period (1850s to 1877), many other boundaries, which are no longer visible above ground, were created within the precinct for control and classification of convicts. These include the brick wall around the Parade Ground, and walls and gates regulating access and egress to the Workshop Complex and the ablutions yard behind the Penitentiary building. The entire Workshop Complex area and the ablutions yard comprise rich archaeological deposits which have only been investigated in part.



**Figure 76.** Detail of a view of the Penitentiary precinct from the north in 1868. Note the row of young trees behind the paling fence. (PAHSMA ref 66-1905)]

The fountain, which marked the centre of the north Parade Ground wall from the late 1860s, is now sited outside the precinct upstream on Radcliffe Creek.

The buildings (Watchman's Quarters) and ruins (Penitentiary and Bakehouse) are major elements of the precinct's cultural landscape. Apart from their general cultural heritage significance, they serve as important visual reference points in the landscape, acting as landmarks and contributing to the picturesque qualities of the precinct landscape. Today these structures 'appear to float within a sea of lawn, without the elements that once defined and explained their setting'.<sup>86</sup> These rolling lawns and the parklike character of the former Parade Ground have their origins in the Carnarvon township period, when the area to the north of the Penitentiary building was used for recreation. As noted above, this space was highly regulated and contained during the convict period.

As a space for control of convicts and work, trees only played a minor role in the cultural landscape during the penal station era. There is a row of young trees visible in a c1868 photo along the paling fence that encloses the grassed area adjacent to the creek. They were gone by 1877. No other trees have been noted in the precinct during the convict period.

Of equal importance however is the way in which this precinct (and perhaps more particularly the Penitentiary ruin) is engaged in a contemporary sense - as a visitor experience and tourism 'icon', as a focal point for the local community, as an enduring symbol of 'Tasmania' and as a heritage place. Each of these relationships imposes another layer of symbolic engagement and of cultural significance.

## **4.2 Architectural Analysis**

This architectural analysis is considered from three perspectives. Firstly the analysis will consider the original building fabric and form as it was constructed as a granary and flour mill (1842-5). Secondly, the analysis will consider the architecture of the building fabric and form at the time it was converted to a penitentiary (1853-7) and finally, analysis will be made of the current presentation of the buildings in the form of an iconic tourist destination ruin with reconstructed elements.

### **4.2.1 Granary and Flour Mill**

The architectural character of the granary and flour mill building constructed at Port Arthur (1842-5) is typical of contemporary structures of this type, albeit on a larger scale. Granaries and flour mills constructed in the mid nineteenth century throughout Australia varied in size from single storey, residential size footprints to the multi level with many bays and compartmentalized interior spaces. The operating system of the mills also varied from water wheel, tread wheel and steam powered machinery. The Port Arthur granary and flour mill building is understood to be one of the largest constructed in Australia in the

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<sup>86</sup> Context P/L, Landscape Management Plan, 2002, p 40.

1840s and notably, one of the largest structures of any type at the time in Tasmania.

Typical granary/flour mill buildings tended to have very simple massing with regular rhythms of window and door openings. They ranged from very simple timber structures to masonry buildings accented by details such as quoining.

The utilitarian nature of the Port Arthur Granary/Flour Mill building was clearly expressed in the architecture with the prominent features of the façade being the water wheel and the loading bay.

The internal layout of the granary/flour mill was also utilitarian, simple and functionally expressive. Although the exact detail of the layout of the interior is not clearly understood (for example the precise position of the water wheel) it is believed to have been a simple open area for each function – the granary, the water wheel, tread wheel and mill.

#### **4.2.2 Penitentiary**

As the building was not purpose built as a penitentiary, the architectural expression resulting from the changes made for this phase of the structure's operation was an interesting combination of the utilitarian warehouse form of the original granary/flour mill with somewhat subtle, yet distinctive alterations and additions made for the new use. However, the scale and overall simple form remained the dominant expression.

The expressed functional aspects of the granary/mill, being the waterwheel and the loading bays were removed and a clock tower with stair access added. Additional structures were added including the bakehouse and laundry to the west, the watchman's quarters to the east and ablution facilities to the rear of the main building. Each of these new structures were designed and built using the same materials and detailing as the converted penitentiary building, integrating the additions with the whole complex.

Close examination of the current exterior and interior of the Port Arthur Penitentiary ruin reveals the extent of alterations that had to be made to the Granary and Flour Mill buildings to make it suitable for the incarceration of convicts. This was a challenge, as the starting point was a structure with large windows intended to light the interior working spaces, in contrast to most penal structures with small and/or high-set openings that prevent views and escape.

Because of this, many of the alterations made to the Granary/Mill during the conversion, relate to the windows and keeping the convicts away from them. The first-floor structure was removed so that two tiers of cells could be placed back-to-back in the middle of the building, removing the cells from proximity to the external windows. Instead, each cell had a narrow internal window that relayed secondary sunlight through ribbed privacy glass.

In the Mess Hall on the second floor, the windows were positioned high above the floor (as the floor level had been lowered). All of the windows on the ground, first and second floors were then barred. The third floor level accommodated the dormitories. Here, most of the windows were blocked up and the bunks placed against the outer walls. Sunlight was admitted via skylights, high on the open ceilings. All fixtures and fittings installed in the converted penitentiary building were the standard components for the penitentiary model imported from England. As such, the internal fit-out was typical of contemporary penitentiary buildings.

### **4.2.3 Historic Ruins**

The current presentation of the precinct as a ruin has been embraced by the community and visitors and has become an iconic symbol of the whole Port Arthur Historic Site. The sheer size of the ruin along with its position at the heart of the historic site with the encircling hills behind and Mason Cove in front provides many picturesque views of both the natural landscape and the human-made elements. The penitentiary ruins, have become the most recognisable image of Port Arthur, and an image frequently used to represent Tasmania's cultural heritage.

As a ruin, the ability to explore, appreciate and investigate the construction methods and materials used during the Granary/ Flour Mill phase and the subsequent Penitentiary phase, is an important part of the heritage value of the place. Equally, the ruin provides a real challenge to the visitor to make sense of the spatial forms and function of the structure. Particular strategies are required to assist the visitor to make sense of the ruin and the interpretation material (whether it be physical or experiential) will be crucial to engaging the visitor.

## **4.3 Operational Analysis**

This operational analysis will discuss how the structures and land in the Penitentiary precinct operated during the various phases of its development, including the granary and flour mill phase (1842-5); the penitentiary phase (1853-7); the tourism phase (1889-ongoing) and associations with the heritage profession phase (1916-ongoing).

### **4.3.1 Granary and Flour Mill phase (1842-5)**

The Penitentiary precinct operated as an industrial area prior to the construction of the granary and flour mill in 1842. As the precinct is relatively flat land situated adjacent to the cove, it was an ideal location for industry including facilities for carpenters, shoemakers and blacksmiths, as well as being a storage area for goods and materials being moved on and off the adjacent wharf. Further workshops constructed at the west end of the precinct accommodated coopers, wood turners, tailors and nail makers. With the construction of the large granary and flour mill, the industrial activity of the precinct intensified despite the necessary demolition of some of the workshops to accommodate the new structure. The precinct area was mostly built upon

during this phase as the water edge of the Cove was a few metres in front of the Granary/ Flour Mill building – the land to the north of the structure had not been reclaimed as yet. Refer also to Section 2.2.7 for a more detailed description of the operation of the flour mill.

### **4.3.2 Penitentiary phase (1853-7)**

The conversion of the Granary and Flour Mill to the Penitentiary building coincided with the reclamation of land on the northern side of the structure, resulting in the land area of the precinct increasing substantially.

The adaptation of the building also changed the operation of the precinct from one of intense industry operating typically during daylight hours only, to a precinct occupied 24 hours a day providing industry and accommodation facilities for the convicts. The granary and flour mill housed large machinery and provided extensive storage areas and was operated by a relatively small number of the convicts and their overseers. The number of people in the precinct increased significantly with the conversion of the granary and flour mill to a penitentiary which could accommodate 484 convicts plus watchmen, constables etc.

#### 'Back to Back' Cell layout

The conversion of the Granary/Flour Mill to the Penitentiary facility included the construction of individual cells in the form commonly referred to as the 'back to back' plan. In contrast, contemporary purpose built penitentiaries were generally designed with a cell layout consisting of rows of cells along perimeter walls, flanking a central corridor. This arrangement enabled maximum use of light and ventilation to the cells and provided easier surveillance from a central point.

The 'back to back' cell plan at the Port Arthur penitentiary was adopted in response to the extant conditions. The physical dimensions of the existing building, including the size and position of the existing windows meant that the typical plan of rows of cells flanking a central corridor would not be possible. The 'back to back' plan required a sophisticated ventilation system to provide fresh air to each cell via a grille in the cell front wall and exhausting of the foul air via a duct system through a shaft between the rear walls of the back to back cells.

The 'back to back' cell plan is thought to have originated at the Maison de Force, at Ghent (Netherlands) in 1772 and became the 'backbone of the Auburn System in the United States'.<sup>87</sup> The Maison de Force at Ghent, and the Auburn system penitentiaries constructed in United States were places of correction for offenders with a regime of solitary confinement at night and congregate labor by day which was similar to the system imposed upon convicts at the Port Arthur penitentiary. It may be deduced that the problems associated with light,

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<sup>87</sup> Kerr, *Design for Convicts*, p86

ventilation and surveillance experienced with the 'back to back' plan were considered of lesser concern for cells where convicts were confined overnight only.

There are no other prisons or penitentiaries with 'back to back' cell plans of this magnitude known in Australia. Small blocks of 'back to back' cells were built in NSW to the design of Mortimer Lewis at the county court houses and in an extension to the Windsor Gaol.<sup>88</sup>

### Parade Ground and Tramway

Reclaiming land to the north of the penitentiary building not only assisted in the structural stability of the building by reducing the degree of water damage to the footings and foundations, it also provided the clear open space adjacent to the building suitable for convict musters. Compared to the rear space of the penitentiary, where the relatively private and informal ablution rituals were undertaken by the prisoners, the front parade ground was a regimented public space where the general musters and inspections were carried out.<sup>89</sup>

The graveled area was formally defined by the construction of a perimeter low masonry wall in 1860. This formalisation of the space demarcated the convict muster area from the general materials storage area of goods associated with the wharf activities. Convict musters were held at least twice a day, morning and night. On various historic plans, the gravel space in front of the Penitentiary building is referred to as the General Parade and Exercise Ground although it is not clear whether or not the space was used for programmed or recreational exercise. This reference to an exercise ground is interesting, as the typical layout for a penitentiary or gaol facility would include a high perimeter wall encircling secure external spaces for convict exercise. At this facility, the isolation of the site provided security and the worst convicts were accommodated in the Separate Prison on the site. Therefore, the usual level of containment would appear to have not been necessary for the convicts housed in this penitentiary.

In addition to functioning as a muster ground for the convicts, the walled space on the northern side of the penitentiary building incorporated a section of tramway that connected the timber collecting areas in the hills behind the precinct with the workshops at the west end of the precinct and the wharf area to the east of the precinct.

<sup>88</sup> Kerr, *Design for Convicts*, p87

<sup>89</sup> Commandant – Governor's Secretary for Penal Establishments 8.4.1871, House of Assembly Journals 22/1871/127 in: *Ian Brand Papers: Tasman Peninsula*, v.3, National Parks and Wildlife Service, Tasmania.

### **4.3.3 Tourism phase (1877-ongoing)**

Shortly after the closure of the penal station in 1877, tourists with a particular interest in charitable and penal institutions began to visit the site. Despite the establishment of the Carnarvon township at the site and the desire of inhabitants and the broader community to distance their daily life from the penal history of the site, the tourism attraction associated with its history continued to grow.

By the mid 1880s a successful business taking day trippers by steamer from Hobart to Port Arthur had developed. There was a slowly changing community attitude to the site, from seeing the place as a dark, grim and miserable record of history that would be best obliterated, to an understanding of the importance of the convict history in the story of European settlement in VDL, as well as a burgeoning appreciation of other values of the place such as the scenic landscape.

The town of Carnarvon was renamed Port Arthur in 1927, in formal recognition of the history of the place and the increasing number of tourists interested in the convict history that were visiting the site. The local community embraced the tourism industry and profited from it through paid accommodation, private museums and associated facilities. By the early 1950s, the vacant ground around the penitentiary structure was used as a caravan park and the watchmen's quarters at the east end of the penitentiary were converted to an ablutions facility for the use of campers.

Tourism to the site was not (and is not) purely related to an interest in the convict history of the site. The isolation and striking natural beauty of the landscape has attracted many including artists who have recorded and interpreted the landscape in their work. As a result of tourism, the Port Arthur Historic Site generally, and more specifically the Penitentiary precinct, has become an iconic symbol of Tasmania. It is likely that the recent World Heritage Listing of the place will increase tourism numbers.

### **4.3.4 Heritage Profession phase (1916-ongoing)**

In 1916, the Port Arthur site was gazetted by the Tasmanian Government and placed under the control of the Scenery Preservation Board. However, as early as 1913, the preservation of the structures on the site was being promoted by architect, Alexander North, with the emphasis placed on the church as the 'central feature' with less interest in the Penitentiary building which at the time was considered to be of 'no artistic value', but potentially it could hold 'some historic interest'.

The demolition of the Penitentiary building appears to have been on the agenda for many years following the fire of 1897. The structural stability of the ruin, the perceived lack of artistic value and the costs associated with any works to such a large structure were all reasons supporting demolition, but nevertheless, the ruin was retained.

The Penitentiary precinct represents a physical record of the progression of the heritage profession in Australia. The transfer of responsibility for the site to the Department of National Parks and Wildlife (DNPW) in 1971 coincided with the decade where significant developments in the formalisation of the heritage profession were occurring. At the same time, heritage legislation was beginning to be enacted and conservation charters, processes and guidelines were being developed.

A report on the *Conservation of Building Fabric and Restoration of the Penitentiary* was commissioned from architects Crawford de Bavay & Cripps in collaboration with Fowler, England & Newton and delivered in 1974. The two firms carried out a series of conservation reports for Port Arthur in the 1970s, including technical assessments such as the characteristics and condition of the Penitentiary's bricks and structure. While these investigations and assessments were funded, no actual conservation works were undertaken at the time.

In July 1979, federal and state governments provided funding of \$9 million for conservation and archaeological works at Port Arthur over seven years – the Port Arthur Conservation and Development Project (PACDP). This project, one of the largest architectural conservation projects in Australia at the time, included techniques, materials and processes which were innovative and inspired a period of conservation practice across the country.

The Port Arthur Historic Site Management Authority (PAHSMA) was established in 1987 with authority to charge a fee to visit the site, partially as a means to generate revenue for the ongoing care of the place. The emphasis at this stage was on investigative work to gain a greater understanding of the existing fabric and the cause of failures in the structure prior to considering any physical intervention works, reflecting the directions being promoted in the heritage industry generally. As a result of these investigations, substantial conservation works, including some reconstruction works were implemented in the 1990s.

Electronic innovations have been employed at the Port Arthur penitentiary precinct to assist in the ongoing conservation of the place. The use of laser scanning technology has enabled detailed engineering analysis, particularly in terms of monitoring structural stability. This information has assisted in the determination of appropriate stabilisation works to perimeter walls which is an ongoing conservation project at the site.

Throughout the twentieth century and into the twenty first century, leading heritage professionals have worked at the Port Arthur Historic Site and the physical evidence of changing philosophies and practices in the heritage profession generally are well represented in the Penitentiary precinct.

#### 4.4 Archaeological Analysis

Archaeological investigations to date in various areas of the penitentiary precinct have demonstrated the presence of highly important deposits and materials; much of this evidentiary material is in a relatively undisturbed state and demonstrates exceptional archaeological integrity. Due to the intact nature of the archaeological record of the precinct, properly structured and rigorously designed archaeological research there will contribute in a major way to a greater understanding of Port Arthur's rich and layered history. This will be especially true if such investigations form part of a broader, multi-disciplinary research agenda.

Although the granary/penitentiary precinct has been the subject of numerous archaeological investigations, research for the current Conservation Management Plan is the first time any level of collation and synthesis of archaeological findings has been undertaken. This preliminary synthesis has indicated:

- The variable nature and/or quality of the primary records relating to previous investigations;
- The variable availability of these primary records;
- That research-based investigations have considerable potential to generate new and important information whereas limited 'monitoring' and/or reactive testing tends to produce equivocal results;
- The sub-surface deposits of the granary/penitentiary precinct have exceptional archaeological integrity, well-developed stratigraphical sequences (which include the standing structures), and important artefactual components; and
- That the archaeological deposits of the precinct have the potential to generate new information that is not available from other sources - on, for example, the complex interplays between the development of incarceration/surveillance systems of the Port Arthur penal settlement and the development of its industrial infrastructure, and the lifeways and experiences of both convicts and administrators.

Notwithstanding that archaeological investigations to date have demonstrated the presence of archaeological materials of great potential, the records of those investigations are highly variable. Most are restricted to primary materials – fieldnotes, drawings, photographs, uncatalogued artefactual material etc. None of the archaeological investigations have been formally reported in what might be considered to be a final format. Analyses of stratigraphy and artefact recoveries have, in general, not been conducted in any detail. Geophysical investigations have been of use but coverage of the precinct is by no means complete and the use of new, high-resolution techniques would considerably improve our knowledge of the sub-surface remains.

Where research-based excavations have been conducted it is clear that such investigations have considerable merit. Jackman and Tuffin's work on the ablutions and workshops areas has demonstrated complex changes in building configurations and layouts. These include changing uses of space; controls on movement in the industrial areas; and insights into convict life and material culture that are rarely evidenced from the archaeology of 19th century penal institutions. The quality of information from such approaches is superior to that which has been achieved from development-oriented projects, where the extent of the investigation has been limited to the footprint of development impacts.

Policies for the extensive and unique archaeological resources of the granary/penitentiary precinct must address both research and management objectives. The potential of the archaeological resources can only be realised through well-designed research enquiries and the proper and full publication of the results of those enquiries. Given that any archaeological research must take account of preceding investigations, the need to complete a review and synthesis of all previous archaeological work conducted at the granary/penitentiary is critical.

#### 4.5 Comparative Analysis

A comparative analysis of the Penitentiary precinct can be wide ranging. The complexities of the place, such as the various stages of construction; the changes to the function of the spaces and the significant adaptation works undertaken to the original building provides a breadth of comparative elements. While each of these comparative aspects are discussed in this section, it should be noted that the sum of these elements of the Penitentiary precinct make it a unique place.

##### 4.5.1 Granary and Mill Architecture

The following comparative examples of granary and mill architecture serve to demonstrate the large scale and early date of the Granary and Mill structures in the Penitentiary precinct at Port Arthur.

##### Callington Flour Mill (1836), Oatlands, Tasmania



**Figure 77.**  
Callington Flour Mill, (1837) at Oatlands  
(source: [www.abc.net.au/rural/content/2010/s2913740.html](http://www.abc.net.au/rural/content/2010/s2913740.html))

Callington Mill was built in 1836 by John Vincent. By 1840, the mill was producing 20-30 bushels of flour per hour. A steam mill was operating by 1850 and production rose to 5-7 tons of flour per day. The granary and steam mill (above) is a typical colonial stone building with a simple rectangular plan and a hipped shingle roof. Twelve pane rectangular windows with stone sills are symmetrically positioned across the façade.

*Burnside Granary, Dilston, Tasmania*



**Figure 78.** Burnside Granary, Dilston, north of Launceston  
(source: [www.heritage.tas.gov.au/media/pdf/January%202008.pdf](http://www.heritage.tas.gov.au/media/pdf/January%202008.pdf))

Burnside granary at Dilston, north of Launceston, is a large, solid and utilitarian structure. The granary was built by a William Bransgrove in the early 19th century, but there is conjecture around the original purpose of the building. Launceston's *Examiner* newspaper reported on 25 August 1909 that 'a Mr Bransgrove erected the [Burnside] building for a distillery, but could not obtain a licence'. In 1938 the same newspaper mentioned that Bransgrove proposed growing cereals on a large scale, so he built a huge granary 90 feet by 30 feet and three storeys high. Typical of this utilitarian building type, the granary is rectangular in plan form with a simple hipped roof and symmetrical openings across the facade.

*Monds Mill (c1846), Carrick, Tasmania*



**Figure 79.** Monds Mill, Carrick, Tasmania (c1846) (source: RNE ID 13006)

Monds Mill is another example of a utilitarian mill, with little in the way of architectural ornamentation. It is a simple gable roofed three-storey bluestone watermill with brick voussoirs over openings.

*Bowerbank Mill (c1853), Deloraine, Tasmania*



**Figure 80.** *Bowerbank Mill, Deloraine, Tasmania (c1853) (source:RNE ID 12430)*

This Georgian three storey stone mill building features brick quoins, reveals and voussoirs to symmetrically positioned openings and is surmounted by a slate gabled roof. There is a single storey annex with iron gable roof and a tall face brick chimney with decorative cornice.

*Ritchies Mill (c1853), Longford, Tasmania*



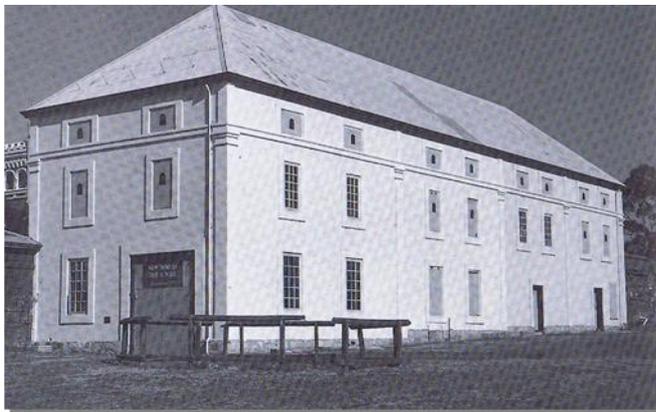
**Figure 81.** *Ritchies Mill, Longford, Tasmania (c1853) (source:RNE ID 12825)*

This two storey Georgian mill building is constructed of brick and stucco. It has a rectangular plan form and is surmounted by a hipped roof with clipped eaves. The multi-pane windows are symmetrically placed in bays across the facade. Internally the building has huge timber members. The remnants of a large brick wall which once enclosed the whole complex are also retained.

Granary (c1832), Richmond, Tasmania

**Figure 82.** Granary, Richmond, Tasmania (c1832)  
(source: RNE ID 11779)

This stone granary is one of a group of Colonial Georgian buildings including a store and residence built about 1832 by James Buscombe. The three storey stone granary has an iron gabled roof and twelve pane windows. The horse operated hoist is still extant.

Flour Mill (1879) New Norcia, Western Australia

**Figure 83.** Flour Mill, New Norcia, WA (1879) (source: D Hutchison, *A Town Like No Other*, p112)

A flour mill was built on the site in the 1850s, and was replaced by this larger mill constructed in 1879. The mill is a three storey solid brick structure with timber floors and a shingle clad hipped roof. The exterior has a simple but elegant expression, with expressed pilasters and architraves around openings. The mill operated with a steam engine which had been ordered from London.

*Flour Mill (1856), Portarlington, Victoria*



**Figure 84.** Portarlington Flour Mill, Victoria (1856) (source:VHR 13006)

The Portarlington Flour Mill is one of the most distinctive flour mill buildings in Victoria constructed at a time when the Bellarine Peninsula was known as the 'granary of the colony'. The building was initially constructed for the Portarlington Steam Flour Mill Company in 1856, and opened for business in 1857. It is a Victorian Georgian design, with coursed rubble sandstone walls with contrasting quoins and stringcourses defining each floor level. The gabled roof is slate clad. There are timber windows on all four walls, most of which have been reconstructed. With the closure of the mill in 1874 the building served a number of industrial uses including storage for a brick maker; a furniture upholstery factory; a printing ink factory and later for artificial fertilizer production. In the 1960s, the Mill was converted into residential flats, and in 1971 the National Trust of Australia (Victoria) adapted the building for use as a folk museum.

*Andersons Mill (1861), Smeaton, Victoria*



**Figure 85.** Anderson's Flour Mill, Smeaton, Victoria (1861) (source:VHR 1521)



**Figure 86.** Waterwheel at the Anderson's Flour Mill, Smeaton, Victoria (1861) (source:VHR 1521)

Anderson's Mill Complex, Smeaton, comprises a large bluestone mill building, a 25 tonne waterwheel which is 8.5 metres in diameter, a 23 metre tall brick chimney, bluestone office, stables, granary, blacksmiths shop and residence. The complex was built for the Anderson brothers from 1861. The mill building is a bluestone four storey ten bay structure with an attic storey beneath the gabled slate roof. The water wheel, built by Ballarat engineering firm Hunt and Opie, is fed by a mill race about 900 metres long which commences at a bluestone weir on Birch Creek. When wheat production shifted to the north-west of Victoria, the mill was refitted for oatmeal and continued to function until 1957. The complex still stands near the creek which once drove the mill. This bluestone flour mill is possibly the largest flour mill ever built in Victoria and the most perfectly preserved mill in Australia.

*Degraves Mill (1857), Kyneton, Victoria*



**Figure 87.** Degraves Flour Mill, Kyneton, Victoria (1857) (source:VHR 310)

Degraves Mill stands beside the Campaspe River, on the site of the Karlsruhe Run which had been established by Charles Ebden in May 1837. The mill was built for William Degraves in 1857 to a design by F M White. Degraves also had a second mill built in the Kyneton district, at Riverview in 1859. The mill is a

large coursed bluestone structure articulated with string courses at floor levels and surmounted by a gabled roof. It is rectangular in plan, measuring about 20 x 10 metres, and has five main bays, defined by small multi-paned windows with expressed stone sills and window heads. Internally, the posts, beams and surviving joists are of Oregon. The original shingle roof is preserved beneath corrugated iron. The verandah is a recent conjectural reconstruction.

*Flour Mill (1856), Castlemaine, Victoria*



**Figure 88.** Flour Mill, Castlemaine, Victoria (1856) (source: VHR 395)

The steam driven mill building is a three storey Georgian-style brick and stone structure designed by Thomas Shephard. The building is symmetrical plan and elevation and features brick blind arcades, multi-paned windows and stone quoining. The mill is considered to be one of the finest in Victoria.

*Former Flour Mill (1870), Naracoorte, South Australia*



**Figure 89.** Flour Mill, Naracoorte, South Australia (1870) (source: RNE ID 7992)

This three storey mill with limestone walls, dressed quoins and a gabled corrugated iron roof was built by Smith and Agar. It was originally operated by water power from the Naracoorte Creek. In 1892, new machinery was added and the mill continued until the early 1930s.

*Flour Mill (1855), Gawler, South Australia*

**Figure 90.** Flour Mill, Gawler, South Australia (1855) (source: RNE ID 6084)

The Mill has random stone walls and the four storey portion of the complex has four bays, with little exterior ornamentation. Internally, the timber floors are supported by sturdy posts and beams. The mill was erected in 1855 by the Harrison brothers. It was extended some time before 1880 and by that time was four storeys high and had associated offices, a timber yard, weighbridge, a blacksmiths shop and forge. It was one of three flour mills in Gawler. In 1915, the mill was gutted by fire and when it was rebuilt the following year, only the central section was completed to four levels. The mill continued to operate until about 1917.

#### **4.5.2 Penal Settlement Architecture and Penitentiary/Prisons**

The following penal settlements, penitentiaries and prisons are comparable to the Port Arthur Penitentiary on various levels. The comparisons are either by date of construction and use, architectural expression or scale of the complex.

*Coal Mines Historic Site (1833–48) Tasman Peninsula, Tasmania*

**Figure 91 -** Coal Mines Historic Site (source: World Heritage nomination)

The Coal Mines Historic Site, like Port Arthur Historic Site, is part of a suite of Australian Convict Sites inscribed on the World Heritage List in July 2010.

The Coal Mines Historic Site was Tasmania's first operational mine, established as a much needed source of coal, but also as a place of punishment for the 'worst class' of convict.

The site comprises over 25 substantial building ruins as well as remains of coal mining activities. The remaining features comparable to those in the Penitentiary precinct at Port Arthur include the main convict station, which is overlooked on higher ground by military and civil buildings (a similar arrangement as at Port Arthur). The prisoner barracks ruin was originally two large stone buildings that housed up to 170 convicts within a fenced compound. Underneath the barracks remain 16 solitary punishment cells. There are also archaeological remains of over 100 separate apartment cells. Another 36 alternating solitary punishment cells were built below the separate apartments and 18 of these remain. The Officers' Quarters and the Assistant Superintendent's House were located within the convict precinct to provide surveillance. The site also includes houses for the Surgeon, Coxswain, Commissariat Officer and Catechist. The Chapel (which also functioned as a school house) is prominently situated in the heart of the main station. Remains of the Bakehouse, Workshops, and the Engineer's Store are also visible. The Coal Mines now operates as an historic site<sup>90</sup>.

*Cascades Female Factory (1828–56) Hobart, Tasmania*



**Figure 92.** *Cascades Female Factory, Hobart (Source: DEWHA Australian Heritage Photographic Library Barcode No dig010156)*

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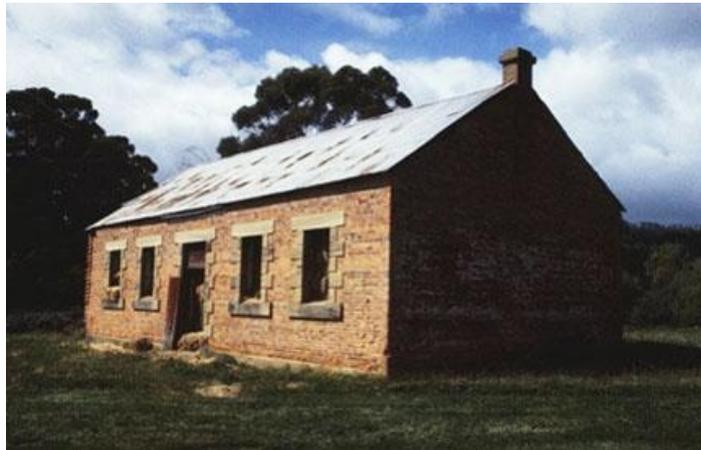
<sup>90</sup> Australian Convict Sites, World Heritage Nomination, January 2008, p 34.

The Cascades Female Factory, like the Port Arthur Historic Site, is part of a suite of Australian Convict Sites inscribed on the World Heritage List in August 2010.

Over half the convict women sent to Australia were sent to Tasmania and the majority spent some time at the Cascades Female Factory as it was the main place for their reception and imprisonment. The factory opened in 1828 and operated until 1856, and was one of Tasmania's longest running penal institutions. It is understood that part of the walls of Yard 3 were remnant walls from the earlier Lowe's distillery on the site<sup>91</sup>. Yards 1, 2 and 3 all contained small cells in which women were punished in solitary confinement. Yard 4 was opened in 1850 as a specially designed nursery yard, separated from the matron's cottage and its garden by a wall built around 1849. After the transportation of convicts to Tasmania ended in 1853, the Cascades Female Factory continued to be used as a prison, and later as a depot for the poor, for the insane, as a hospital, and for assorted welfare activities. The site was auctioned in 1905 and successive owners demolished the buildings. The perimeter walls enclosing Yards 1, 3 and 4 and the matron's cottage in Yard 4 remain intact and there are extensive archaeological remains, as well as extensive documentary and pictorial collections associated with the site. Some buildings and walls have been reconstructed in recent times to assist in the understanding of the early layout of the complex. The site operates as a small museum and gallery.

The site has less above-ground fabric at the Penitentiary precinct, and therefore, its original use is far less evident.

*Cascades Probation Station Mess Hall, Tasman Peninsula*



**Figure 93.** *Cascades Probation Station Mess Hall, Tasman Peninsula* (source: RNE ID 11983)

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<sup>91</sup> Kerr, *Design for Convicts*, p 67.

The use of quoins and dressings to openings contrasting with walls was a common treatment for penal station buildings in VDL. The former Mess Room at Cascades Probation Station on the Tasman Peninsula employs this detailing. This station was in operation from 1842 to 1857.

*Commissariat Store, Darlington Probation Station, Maria Island, Tasmania*



**Figure 94.** Darlington Commissariat Store, (c1825) (source:NHL ID 105933)

The Commissariat Store of c1825 at Darlington Probation Station, Maria Island, is a larger structure than the Cascades Probation Station Mess Hall, but has similar articulation. Here, the walls are stone, with contrasting brick window dressings. At the time of its construction, it was believed to be the largest edifice in all of VDL, and possibly the Australian colonies.

*Freemantle Prison (1852-86), Western Australia*



**Figure 95.** Freemantle Prison, (source:NHL ID 105762)

The Fremantle Prison, like Port Arthur Historic Site, is part of a suite of Australian Convict Sites inscribed on the World Heritage List in July 2010. The site was a convict barracks and prison for male convicts and now operates as a museum and historic site.

The main cell block is an immensely long (145m) four-storey structure was custom built as a prison. While built in limestone quarried at the site, architectural ornamentation (quoins, arched windows) is confined to the Anglican Chapel which projects from the centre. The rest of the building was intended to be 'of the simplest and plainest construction ... all ornamental expense ... carefully avoided'.

Like the Port Arthur Penitentiary, it had two dormitories for the better-behaved prisoners, where 80 men in each slept in hammocks. The majority of the building comprised tiers of separate cells flanking full-height central corridors. As at the Port Arthur Penitentiary, the cells were intended to accommodate convicts who worked elsewhere during the day, therefore, cells were small. The cells are located along external walls, permitting direct sunlight in through small, high-set windows. Central corridors incorporate galleries with metal railings at each level – much like the first two levels of separate cells at the Port Arthur Penitentiary turned inside out. As with the Port Arthur Penitentiary building, all of the fittings, cell doors, gallery railings, etc. were ordered from England.<sup>92</sup>

The design by Captain Henderson was based on the principles of prison design developed by Joshua Jebb at Portland and Pentonville in England. Those models were modified to use local materials and stripped of architectural refinements because of the shortage of funds and skilled labour.

*Hyde Park Barracks, New South Wales*



**Figure 96.** *Hyde Park Barracks* (Source: World Heritage nomination)

<sup>92</sup> Kerr, *Design for Convicts*, pp 165-166.

Hyde Park Barracks is also part of the suite of Australian Convict Sites inscribed on the World Heritage List in July 2010.

The Hyde Park Barracks was built in 1819 to house, clothe and feed convict men and boys. This impressive brick building and walled compound, located at the head of Sydney's historic Macquarie Street, was designed by convict architect Francis Greenway. After 1848 the main dormitory held newly arrived female immigrants while a handful of government agencies made use of surrounding buildings. In 1862, separate wards for destitute women were added upstairs and the Barracks became known as the Hyde Park Asylum. Sydney celebrated the 50th anniversary of Queen Victoria's reign in 1887 with the construction of major public buildings and monuments. The Hyde Park Barracks became a hub of government departments and renamed Chancery Square. Until the late 1970s, thousands of public servants, legal workers and litigants occupied dingy office spaces, courtrooms and corridors, scattered throughout the increasingly crowded complex. Today the Hyde Park Barracks is a museum.

### *New Gaol, Norfolk Island*



**Figure 97** *New Gaol, Norfolk Island (Source: Norfolk Island: The Website)*

The New Gaol at Norfolk Island is also part of the suite of Australian Convict Sites inscribed on the World Heritage List in July 2010.

The Gaol was commenced in 1836 but was not completed until 1847. It was built with the aim of reform by isolation, and contained a central pentagonal building of 84 cells, two lockup rooms ten turnkey's rooms and ten yards. Each cell had stone walls and floors and a timber ceiling; was 6ft long, 5ft wide, almost 11ft high, and was occupied by up to 3 prisoners. The complex also contained another 40-cell block, two service buildings, 12 solitary confinement "apartments" about which the Royal Engineer wrote "...the convicts regard the...new cells with dread...they are the most perfect specimens of prison construction I have seen...", and two "dumb cells" which prevented the transmission of light and sound - sending their occupants insane.

### Separate Prison, Port Arthur



**Figure 98.** *Separate Prison, Port Arthur*  
(Source: [www.portarthur.org.au](http://www.portarthur.org.au))

The Separate Prison, located at Port Arthur adjacent to the Penitentiary precinct, is also part of the suite of Australian Convict Sites inscribed on the World Heritage List in July 2010.

In 1848, harsh physical punishment and labour within the prison was rejected in favour of punishment of the mind. Flogging gave way to solitary confinement. Unlike the Penitentiary, which was essentially a dormitory for convicts sent out to work, convicts in the Separate Prison were incarcerated permanently. The planning of the Separate Prison was also very different from the Penitentiary: the linear planning of the Penitentiary gave way to a cruciform/ radial design based on the panopticon model.

The Separate Prison was built at Port Arthur in 1850. Cruciform-shaped, each of the four wings comprised a central corridor flanked by rows of solitary confinement cells. Separated by thick sandstone walls, it was hoped that the convicts would benefit from contemplative silence and separation.

#### **4.5.3 Cultural Icons**

The Penitentiary precinct is the most iconic and recognisable element of the Port Arthur Historic Site. In particular, the Penitentiary building is an iconic cultural landmark, and undoubtedly one of the most recognisable images used in Tasmania to represent the state's cultural heritage.

As a cultural icon, the Penitentiary building can be compared to places in other locations which have become a touchstone for representing the place. For example, the Opera House and Harbour Bridge are images typically used to represent Sydney and in Melbourne, images of Flinders St Station are often used to represent the city. Internationally, examples include the Eiffel Tower, which is commonly used to represent Paris and the Colosseum, used to represent Rome.

#### 4.5.4 Conclusion

In terms of its architectural expression, the Port Arthur Penitentiary building compares most closely with other buildings and ruins in VDL, such as the main convict station at the Coal Mines Historic site, the Cascades Probation Station Mess Hall (Tasman Peninsula) and the Darlington Commissariat Store (Maria Island). All these buildings share a common use of quoins and dressings to openings contrasting with walls. In all these cases, local materials were employed and the Cascades Probation Station Mess Hall, which is located close to Port Arthur and contemporaneous in date, may have influenced the choice of materials and architectural expression for the Port Arthur mill and granary, or visa-versa.

As a flour mill and granary, the Port Arthur Penitentiary precinct structure was substantially larger than comparative flour mills referred to above, and possibly one of the largest purpose-built flour mill and granaries in Australia. The functional aspects of the flour mill and granary were essentially utilitarian and did not vary greatly.

In terms of its detailed planning and scale as a penitentiary facility, the Port Arthur Penitentiary building can be compared with the Fremantle Prison. As with the Penitentiary building, interior fittings for Fremantle were ordered from England. However, the cells at Fremantle are arranged around central corridors with cells abutting perimeter walls, whereas at the Penitentiary building, corridors are adjacent to perimeter walls.

It would appear that the Penitentiary building is a rare example of a building retro-fitted for use as a prison, particularly on such a large scale. Prisons were more typically purpose-built due to the necessity for security. The only other known examples of buildings adaptively re-used for use as a prison facility include the Cascades Female Factory, where part of a former distillery was subsumed into the structure, and the Launceston Prisoners Barracks, which was a 'two storey front entry building though it was in fact designed as a store'.<sup>93</sup>

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<sup>93</sup> Kerr, *Design for Convicts*, p72

## **5.0 HERITAGE VALUES**

### **5.1 Assessment of Heritage Values by Criteria**

This part of the conservation management plan provides an assessment of the heritage values of the Penitentiary precinct, followed by a summary statement of significance. As this report has been prepared in accordance with the 2008 Statutory Management Plan (SMP), the same assessment methodology and criteria are followed here. They are based on the National Heritage List criteria, adapted for both state and national levels of significance. Assessment of the precinct is based on the history of the site and comparative analyses found in this report, supplemented by the assessment found in the SMP, particularly in regard to social significance, as there was minimal investigation of this aspect in the present project.

#### **5.1.1 Historic Value**

*The place has heritage value because of its importance in the course, or pattern, of Australia's or Tasmania's natural or cultural history.*

The Penitentiary precinct comprises a rich and complex cultural landscape of natural and human-made topography, below-ground deposits and above-ground structures. Its primary layers relate to the convict era (1830-77). Together, these elements provide a physical chronicle of its varied past, which includes extensive reclamation of land, a series of built structures on the south side of the precinct, as well as far-reaching changes in use and the built fabric (both intentional – as the Penitentiary conversion, and unintentional – as the bushfire of 1897).

The construction of the Flour Mill and Granary at Port Arthur on such a large scale in 1842-45 illustrates the momentary spike in grain prices in the late 1830s and early '40s that made it seem like a money-saving and potentially profitable enterprise. That infrastructure intended to serve the entire colony was constructed at a penal station shows both the extensive influence of the Convict Department in all the affairs of Van Diemen's Land, and the influence of the probation system (introduced in 1839) which made labour prices for private engineering and construction projects prohibitive, while the Convict Department could 'employ' resident convict workforces for the price of room and board.

Convict labour was used again in the conversion of the Mill and Granary to a Penitentiary and rebuilding and expansion of the Workshops Complex in 1853-58. This work, again, is an exceptional example of the 19th-century European strategy of using the forced labour of convicts to build the infrastructure which contained and supported them. Similarly, modifications to the cultural landscape of the Penitentiary precinct, such as the reclamation of the foreshore and the construction of the Champ Street retaining wall, speak of the immense effort and scale of the convict labour, skills and workmanship required to facilitate these changes.

The Penitentiary conversion and the evolution of its precinct reflects in their physical form the evolution of philosophies about punishment and social reform, and demonstrates the adaptation of the British penal system within a colonial context. The installation of a convict-powered treadwheel in the Mill illustrates the corporal punishment regime in place until about 1850, when the philosophy of separation gained currency. The historical organisation and separation of space within the landscape and inside the buildings expresses the desire for surveillance and control of movement, and separation of classes of convicts within the system. These aspects are now only partially legible in the above-ground remains, in particular, in the gated yard of the Watchmen's Quarters yard and the separate cells in the Penitentiary.

The former Workshop Complex illustrates the system of convict management devised by Lieutenant-Governor Arthur and upon which the Port Arthur settlement was founded. Taking its inspiration from the mechanistic fervour of the Industrial Revolution, it sought to mould men into docile and industrious workers. The regime at Port Arthur ensured that men would be punished in an attempt to deter further crime, but it also sought to reform them by offering the opportunity to develop skills that would equip them for a productive and law-abiding life after incarceration.

In pursuit of reform and economic self-sufficiency, Port Arthur was an industrial establishment. The Penitentiary precinct was a major component of this establishment, and the Mill and Granary was, and remains, one of the most visible elements. Apart from the flour produced during the 1840s, in the Workshop Complex convicts were engaged in foundry work, shoemaking, and the manufacture of a wide range of consumer goods for both government and private markets. The extent of the industrial operations in the precinct illustrates the importance of 'work' in the penal system and the role of convicts in helping to build new capitalist colonial economies.

Port Arthur was the cradle of the Tasmanian tourism industry, and of heritage tourism at a national level, with the first steamer loads of tourists arriving from Hobart as soon as it closed in 1877. For decades the site has been Tasmania's foremost tourist destination. Due to its physical prominence, both in size and location, the Penitentiary ruins are one of the most iconic and recognisable elements of the site.

The Penitentiary precinct has been one of the major foci of heritage conservation at the Port Arthur Historic Site, which has generally been at the forefront of heritage management practice at both the state and national level. When it was gazetted as a Scenic Reserve in 1916 it became the first historic place in Tasmania's reserve system, and the first historic cultural reserve in Australia.

### **5.1.2 Scientific or Research Value**

*The place has heritage value because of its potential to yield information that will contribute to an understanding of Australia's and Tasmania's natural or cultural history.*

In combination, the documentary evidence, collections, structures, cultural deposits and landscapes of the Penitentiary precinct have continued potential for archaeological research, to add to the work already carried out over the past 30 years. Together, they have the potential to reveal particular aspects of the implementation of the convict system and the evolution of the precinct.

The Penitentiary precinct in particular, and the Port Arthur Historic Site in general, have been an important place in the development of method and theory in Australian historical archaeology. It has been a major training ground for Australian and overseas archaeologists for over 30 years.

The above-ground ruins in particular represent clear evidence of construction technology, use of locally available raw materials and the on-site production of building materials (in particular, bricks, lime, ashlar), and the adaptation of imported traditions to suit local conditions.

### **5.1.3 Aesthetic Value**

*The place has heritage value because of its importance in exhibiting particular aesthetic characteristics valued by a community or cultural group. These relate to sensory perception, i.e., consideration of form, scale, colour, texture, material, smell or sound.*

The Penitentiary precinct is a prominent and highly recognisable visual landmark in a cultural landscape of picturesque beauty. The precinct, especially the Penitentiary and Bakehouse ruins, are dramatic when approached by water, or when first glimpsed upon emerging from the Visitors' Centre. The precinct has also provided inspiration for generations of artists and photographers, such as the photographer, John Watt Beattie.

The picturesque aesthetic of the Penitentiary precinct is the product of the interplay between its natural setting (the harbour foreshore with a backdrop of hills and forest), the ruins and the park-like appearance of the lawns around them. The precinct's setting has changed over the years: in the mid-to-late 19<sup>th</sup> century, the precinct had a more de-forested, urbanised backdrop of civil and military buildings and a more industrialised foreground given over to activities such as timber milling and storage. This has gradually evolved to become a more picturesque setting, with backdrop buildings gradually deteriorating to become ruins, and a park-like foreground of extensive lawns replacing an earlier, more utilitarian foreground.

Perceptions of the precinct, from the 19<sup>th</sup> century through to the present day, reflect nostalgic notions of the past, not necessarily consistent with the historical

authenticity of the place. Tensions have arisen between the perceptions of the precinct's (and broader historic site's) aesthetic appeal and the historical values associated with the important themes of industry and incarceration. Some of the picturesque qualities of the landscape, such as the extensive lawns, have been created in the post-war period to enhance the precinct's appeal to tourists, but also as a result of the PAHSMA's need for a low-maintenance treatment for the precinct.

#### **5.1.4 Technical Value**

*The place has heritage value because of its importance in demonstrating a high degree of creative or technical achievement at a particular period.*

When completed, the Flour Mill and Granary along with the hydro-engineering works that served them (though outside of the Penitentiary precinct) were a triumph for the Convict Department in their scale and the complexity of the related infrastructure, though not in their subsequent operation. When completed in 1845, and for at least a decade after, the combined Mill and Granary were believed to be the largest masonry structure built in Australia. The mixed bag of hydro-engineering solutions, comprising an underground aqueduct and piping combined with overhead piping and flume, reflected the difficult terrain and built-up areas between the supply reservoir and the Mill, and the high degree of creativity of Alexander Clark in adapting current industrial practices to local conditions. This combination of water-supply features is believed to be unique in colonial Australia. While there were minor examples of overhead water troughs in New South Wales, there is no known colonial equivalent of the 90 metres of underground aqueduct and piping to power a mill.

The ingenuity demonstrated in the construction of the Flour Mill infrastructure is counterbalanced by the lack of foresight in regard to the power supply: water from Settlement Creek. The lack of a sufficient head of water for up to nine months a year led to the failure of the Mill and its subsequent reuse as convict accommodation. This was combined with changes in the Port Arthur convict population and regimes of corporal punishment which meant that the treadwheel did not serve as a practical alternative to water-power during the dry months, as planned. The over-optimistic approach of the Convict Department in constructing such a large facility without a sufficient power source was paired with the fact that solely water-powered mills were already becoming old-fashioned by the late 1830s, displaced by those powered by steam engine (either solely or as a back-up in dry months). Engineer Alexander Clark had already installed a steam engine in a Hobart mill in 1836, so the technology and means were available at the time. These factors led to the Mill and Granary rapidly becoming obsolete.

The buildings within the Penitentiary precinct are important in demonstrating the labour, skills and workmanship of convicts. While parts of it demonstrate high quality workmanship and period construction techniques, other aspects – such

as the under-fired bricks – reveal a lack of skills and technical mastery of an involuntary workforce.

The recycling of the Mill and Granary into a Penitentiary demonstrate a conservative approach to the use and reuse of the building stock at Port Arthur. The extensive fenestration of the Mill/Granary was ill-suited to the new use as controlled accommodation and required extensive adaptation. The two tiers of separate cells at the bottom of the building had to be situated back-to-back, facing open galleries lit by the external windows. This contrasts with other cell blocks built in accordance with the Pentonville Prison model which have a central gallery and cells backing on the external walls (with very small and secure windows). On the top floor, security of the dormitory was increased by bricking in most of the windows and building the sleeping cage bunks along the external walls. This space was lit and ventilated by skylights.

### **5.1.5 Social Value**

*The place has heritage value because of its strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.*

The Penitentiary precinct is the most iconic and recognisable element of the Port Arthur Historic Site which itself is one of the best-known symbols of Australia's convict past, representing one of the foundation stories in Tasmania's and the nation's history. In particular, the Penitentiary building is an iconic cultural landmark, and undoubtedly one of the most recognisable images used in Tasmania to represent the state's cultural heritage.

In focus group discussions with members of the local (Tasman Peninsula) community, the Penitentiary ruins (including the Bakehouse) emerges strongly as an individual feature of social value.<sup>94</sup> Port Arthur as a whole is an important foundation for Tasmanians' shared sense of identity, evoking intense, and at times conflicting, feelings about who they are and their place in the world. As one of the focal points of Port Arthur, and serving a purely symbolic function in its ruinous state, the Penitentiary precinct buildings have served as a lightning rod for these feelings, from early calls to demolish it as a blot on the landscape, to current pride and protectiveness of the structures in their present condition. The efforts to 'clean up' and beautify the Historic Site throughout the post-convict periods are expressive of the ambivalence and denial which has surrounded Tasmania's convict origins and their links with community identity.

The Penitentiary precinct has been a focus for conservation and stabilisation works over the past 50 years, due to its precarious condition as a ruin. For this reason, many heritage practitioners have worked on it and it has provided a proving ground for new conservation techniques and best practice. The wider precinct has also been the subject of many archaeological investigations by local, interstate and overseas archaeologists. As a result, much of the

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<sup>94</sup> Design 5, 'Separate Prison CMP, 2003, p 106.

Australian heritage community is both aware of the heritage values of the Penitentiary precinct and invested in its ongoing care.

#### **5.1.6 Special Association Value**

*The place has heritage value because of its special association with the life or works of a person, or group of persons, of importance in the natural or cultural history of the nation, state and/or local community.*

The Penitentiary precinct has outstanding heritage value to the nation because of its special association with a wide range of individuals including:

- Designers, builders and engineers who designed, constructed and adapted infrastructure within the Penitentiary precinct,
- Generations of administrators who planned and supervised activities in the Penitentiary precinct,
- The many convicts who worked and lived in the Penitentiary precinct,
- Artists and writers who have produced work inspired by the beauty and foreboding history of the place,
- The many heritage professionals who have worked, and continue to work, in the precinct, which has been a proving ground for new conservation techniques, archaeological investigations and best practice for some 30 years.

#### **5.1.7 Indigenous Value**

*The place has heritage value because of the place's importance as part of Indigenous tradition.*

While the wider Port Arthur Historic Site and its environs contain a range of Aboriginal sites in a cultural landscape that was managed by and meaningful to the Pydairreme band of the Oyster Bay people who historically occupied this area, there are no known indigenous values associated specifically with the Penitentiary precinct. While there is believed to be at least one Aboriginal burial on the Isle of the Dead, there were no known Aboriginal convicts held at Port Arthur, so none are believed to have been employed or housed in the Penitentiary precinct.

### **5.1.8 Rarity Value**

*The place has heritage value because of its possession of uncommon, rare or endangered aspects of Tasmania's and Australia's natural or cultural history.*

The Flour Mill and Granary are believed to be the largest structure built in Van Diemen's Land in its day, and possibly in the Australian colonies. It was certainly the largest flour mill and granary in the colony and possibly Australia at the time. Furthermore, the adaptive reuse of the Flour Mill and Granary for use as a Penitentiary is rare, particularly on such a large scale. Prison facilities were more typically purpose-built due to the necessity for security.

The mixed bag of hydro-engineering solutions, comprising an underground aqueduct and piping combined with overhead piping and flume, reflected the difficult terrain and built-up areas between the supply reservoir and the Mill, and the high degree of creativity of Alexander Clark in adapting current industrial practices to local conditions. This combination of water-supply features are believed to be unique in colonial Australia. While there were minor examples of overhead water troughs in New South Wales, there is no known colonial equivalent of the 90 metres of underground aqueduct and piping to power a mill.

### **5.1.9 Representativeness**

*The place has heritage value because of its importance in demonstrating the principal characteristics of a class of natural or cultural places.*

The original form of the Granary and Flour Mill are a representative example of high-quality industrial and service buildings in the colonial Georgian style. While simple and regular in its articulation, care was taken with the addition of sandstone quoining to corners and around openings. Engineer Alexander Clark insisted that all sections of the building have the same height along its entire length as he considered it a 'noble edifice' that would be 'defaced' by a lack of symmetry.

The Penitentiary separate cells are, in their detail, an example of the Pentonville Prison model, adapted to an existing building with some changes. All of the necessary fittings and fixings for the cells (e.g., obscure glass, bells, gallery railings) were ordered from England.

The Penitentiary dormitory was the 'apogee' of the use of sleeping cages for Category 1 and 2 convicts. They were developed at the Hobart Prison by Commandant Boyd to prevent physical interaction between convicts at night, and were introduced by Boyd to Port Arthur.

## 5.2 Statement of Heritage Values

The Port Arthur Historic Site is of exceptional heritage value at Local, State, National and International levels. It is a potent representation of the transportation of convicts and of the ideas and beliefs about the punishment of crime during the nineteenth century. Through the forced migration of convicts, the British Empire was able to transform its criminals into instruments of colonisation and empire building. In addition, transportation to Port Arthur was a powerful mechanism to deter crime, due to its geographic isolation, but also for the forced hard labour convicts would be required to undertake.

The Port Arthur Historic Site was the first historic place in Tasmania's reserve system, and the first historic cultural reserve in Australia. It was the cradle of the Tasmanian tourism industry, and of heritage tourism at a national level.

Located on the edge of Mason Cove in the heart of the Port Arthur Historic Site, the Penitentiary precinct comprises a rich and complex cultural landscape of natural and human-made topography, structures and below-ground deposits. The Penitentiary precinct is an integral part of the Port Arthur Historic Site. The precinct is bound by gravel paths to the north, east and west and the stone retaining wall along Champ St to the south. The precinct is of picturesque beauty and the Penitentiary building is an iconic cultural landmark, and one of the most recognisable images used in Tasmania to represent the state's cultural heritage.

The construction of the Flour Mill and Granary in 1842-45 coincided with a spike in grain prices in the late 1830s and early '40s, inspiring the Convict Department to 'employ' resident convict workforces to produce flour for potentially lucrative government and private markets. The Granary and Flour Mill are representative examples of industrial buildings constructed in the colonial Georgian style. When completed, and for at least a decade after, the combined Mill and Granary were believed to be the largest masonry structure in Australia.

The conversion of the Mill and Granary to a Penitentiary (1853-57) and the evolution of the wider precinct reflect both the failure of the Granary and Mill as a viable enterprise and the evolution of philosophies about punishment and social reform. The conversion is a rare example of the adaptive reuse of a building for use as a Penitentiary, a building type more typically purpose-built due to the necessity for security.

The Penitentiary precinct has outstanding heritage value to the nation because of its special association with generations of administrators who planned and supervised activities in the precinct, the convicts who worked and lived here and the many heritage professionals who worked in the precinct, which has been a proving ground for new conservation techniques, archaeological investigations and best practice for some 30 years.

### 5.3 Significance of Components

The 2000 Port Arthur Conservation Management Plan rated the relative significance of elements within the site using a four-tiered hierarchy. This was based on the significance of the item itself and the relative contribution it made to the overall significance of the Port Arthur Historic Site. Items were graded to be of exceptional, high, some or low significance. The Penitentiary, Watchman's Quarters, Penitentiary Bakehouse, and Workshop Complex site were all assessed as being of 'exceptional' significance. Places assessed as being of 'exceptional' significance 'meet one or more of the assessment criteria at an outstanding level [i.e., of National or higher significance]. These elements are integral to the cultural significance of Port Arthur.' Radcliffe's House/Shop site is only of 'some' significance. Those items of 'some' significance meet one or more of the assessment criteria at a state level. There is no specific mention of level of significance of the Parade Ground.<sup>95</sup>

For the purposes of this precinct specific CMP, a variation of the four-tiered hierarchy of levels of significance has been adopted. Due to the complexities of the fabric of a ruin, additional descriptions for the levels which relate specifically to this precinct have been provided.

Therefore, the following categorization has been adopted –

***Exceptional significance (original fabric)***

- All original building fabric (1842-77) [note this includes the fountain which is currently located outside the precinct].
- Archaeological remains

***High significance (reconstructed fabric)***

- Watchman's Quarters roof and joinery
- North wall of bakehouse

***Limited significance (introduced fabric not identified as intrusive)***

- Conservation works
- Power Substation
- Interpretative signage
- Trees and soft landscape

***Intrusive (introduced fabric not identified as significant)***

- Structural stabilization fabric
- Walkway
- Rock and plaque

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<sup>95</sup> GML, CMP, 2000, pp 50-51.

#### 5.4 Condition of Heritage Values

The Commonwealth Environment Protection and Biodiversity Conservation (EPBC) Regulations 2000 require that a management plan for a National Heritage place 'assess and monitor the condition of heritage values'. These values extend beyond the physical fabric of the place, to the intangible heritage of the place, which should also be managed and conserved.

The Penitentiary precinct is in good condition, retains a medium level of integrity and is well managed.

The heritage values of the Penitentiary precinct are embodied in the attributes of the place, which include the physical fabric of the place in its setting, that is, buildings, ruins and below-ground remains. It also includes the non-physical setting – the related records and collections, as well as social connections to the place.

#### 5.5 World Heritage Criteria

The Port Arthur Historic Site was inscribed on the World Heritage List in July 2010, as part of a suite of Australian convict sites nominated under criteria (iv) and (vi) of the World Heritage criteria.

These sites were nominated and accepted for their outstanding universal significance as:

- An exceptional example of the forced migration of convicts - an important stage of human history (criterion iv) and
- A significant example of global ideas and developments associated with the punishment and reform of the criminal elements of humanity during the Age of Enlightenment and the modern era (criterion vi)

The Penitentiary precinct makes an important contribution to this story, both in terms of expanding Britain's sphere of economic, military and political influence across the world and also, as a powerful example of transportation as a mechanism in deterring crime.

Convicts such as those housed in the Penitentiary were a cheap, controllable and replenishable workforce. Young and physically fit male convicts were particularly well suited to empire building and many were skilled in various trades. These convicts were in the frontline constructing infrastructure, clearing the land, developing natural resources and forging the first European settlements<sup>96</sup>.

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<sup>96</sup> Australian Convict Sites, World Heritage Nomination, January 2008, p 76.

Port Arthur evolved into a major maritime and industrial complex through the efforts of these male convicts. Convicts such as those incarcerated in the Penitentiary precinct played a major role in the construction of roads and buildings, quarrying, brick making, clearing land, felling timber, grinding wheat and manufacturing products. They produced critical supplies for the colonies including worked stone, sawn/ milled timber, shoes, clothes, ironmongery and wheat, and some of these goods were exported to Britain. At the Granary and Flour Mill, convicts produced up to 18 bushels of flour per hour. They provided the human power for the treadmill along with the water wheel to grind the wheat<sup>97</sup>.

The Penitentiary precinct at the Port Arthur Historic Site is an important representation of the notion of transportation as a mechanism to deter crime, due to its geographic isolation, but also for the forced hard labour convicts would be required to undertake. For example, around 60 convicts provided the human power for the treadmill in the Granary which was brutal work akin to climbing a never-ending stairway. The Penitentiary housed convicts wearing chains (weighing between 6 and 13 kilograms) in individual cells measuring 2.2 metres by 1.3 metres. It also housed better behaved convicts in the dormitory who were not chained<sup>98</sup>.

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<sup>97</sup> Australian Convict Sites, World Heritage Nomination, January 2008, p 76.

<sup>98</sup> Australian Convict Sites, World Heritage Nomination, January 2008, p 83.

## 6.0 KEY ISSUES

### 6.1 Opportunities & Constraints arising from Significance

- The significance of the place as a ruin at a tourism destination does place constraints and limitations on adaptive reuse. As such there is limited potential for adaptive reuse of the Penitentiary and Bakehouse/Kitchen ruins. It is recognised though that the reconstruction works undertaken to the Watchman's Quarters does provide the potential for adaptive reuse of this component of the precinct.
- The significance of the Penitentiary and Bakehouse/Kitchen ruin also places limitations on appropriate/acceptable levels of reconstruction. Reconstruction should only be considered if sufficient information on the original form is available or the reconstruction contributes to the stability and/or conservation of the existing fabric.
- The structural stability of the ruin is paramount to the conservation of the place. While this may be viewed as a constraint it should also be considered an opportunity to implement best practice conservation and to assist in the interpretation of the place.
- Layers of significance relating to the various phases of use and development of the place have been identified. The current interpretation emphasis is on the penitentiary period (1853-7). An opportunity exists to reconsider this emphasis and provide greater attention to the original function and later phases of the history of the precinct.
- The site's history as a place exhibiting the development of heritage practices and principles provides an opportunity to develop this further with possible heritage workshops, research projects etc.

### 6.2 Relevant Legislation, Policies & Guidelines

#### 6.2.1 PAHSMA Act & Other Applicable Tasmanian Legislation

The *Port Arthur Historic Site Management Authority Act 1987* created the management authority as a statutory body responsible for the care, control and management of the site. The authority must: ensure the preservation and maintenance of the historic site as an example of a major British convict colony and penal institution of the 19<sup>th</sup> century, coordinate archaeological activities, promote and understanding of the historical and archaeological importance of the site, promote the site as a tourist destination in accordance with the

management plan, provide adequate facilities for visitor use, and seek supplementary financial assistance to support its functions.

The Port Arthur Historic Site is declared reserved land under the *Nature Conservation Act 2002*. The site must be managed in accordance with the objectives of the *National Parks and Reserves Management Act 2002*. These objectives include: to conserve sites or areas of cultural significance, to encourage education based on the purposes of reservation and the natural or cultural values of the national park, or both, and to encourage and provide for tourism, recreational use and enjoyment consistent with the conservation of the national park's natural and cultural values.

The management of places of historic cultural heritage significance is also required to be in accordance with the relevant planning scheme, which is subject to the *Land Use and Approvals Act 1993*.

The Tasmanian *State Coastal Policy 1996* is a statutory document that applies to the 'coastal zone'. This includes the seabed, tidal waters and foreshore, the water, plants and animals and associated areas of human habitat and activity. The main principles of the policy are to ensure: protection of the natural and cultural values, that the area is use and developed in a sustainable manner, and that there is shared responsibility for the management and protection of the area. All future use and development of public land in the coastal zone is to be consistent with this policy.

### **6.2.2 Statutory Management Plan (2008)**

The overriding document under which the whole site is managed is the PAHS (Port Arthur Historic Sites) *Statutory Management Plan (SMP) (2008)* prepared by Godden Mackay Logan Pty Ltd in association with Greg Middleton and Port Arthur Historic Site Management Staff. The SMP provides general conservation policy directions for the site and establishes a framework for the completion and integration of subsidiary plans, such as this CMP.

The purpose of the SMP was to provide a framework for the effective use, development and management of the Port Arthur Historic Sites, particularly in relation to their heritage values.

The SMP was prepared by PAHSMA to meet its statutory obligations under the *PAHSMA Act 1987*, the *National Parks and Reserves Management Act 2002* and the *Nature Conservation Act 2002*. It was also prepared in compliance with relevant Commonwealth provisions and regulations such as the *Environment Protection and Biodiversity Conservation Act 1999*.

### **6.2.3 World Heritage List**

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) seeks to encourage the identification, protection and preservation of cultural and national heritage around the world considered to be of outstanding

universal value to humanity. This is embodied in an international treaty called the *Convention concerning the Protection of the World Cultural and Natural Heritage*, adopted by UNESCO in 1972. The Convention established the World Heritage List, which reflects the wealth and diversity of the Earth's cultural and natural heritage and includes more than 900 properties, 18 of which are in Australia.

Australia became a signatory to the World Heritage Convention in 1974. Thus, the Australian Government carries responsibility to UNESCO for meeting the requirements of the Convention in relation to places inscribed on the World Heritage List. This includes the presentation, protection, rehabilitation, conservation of the place and its transmission to future generations.

The inscription of a place on the World Heritage List does not imply a transfer of responsibility to the Commonwealth. The well-established processes and protocols for ensuring the conservation of a site's heritage values under the existing state legislation remain the primary framework for protection. However, any proposals that a site manager considers may affect the World Heritage values of the place must be submitted to the Minister for the Environment and Heritage under the *Environmental Protection and Biodiversity Conservation Act* (1999). This represents no change to current arrangements for Port Arthur as this requirement already applies in relation to its National Heritage values following the sites inscription on the National Heritage List in 2005.

#### **6.2.4 National Heritage List**

The Penitentiary Precinct has been included in the National Heritage List as part of Port Arthur since 3 June 2005, as place No. 105718. As such it is administered under the *Environment Protection and Biodiversity Conservation Act 1999*.

The National Heritage List, which commenced on 1 January 2004, was established through amending the *Environment Protection and Biodiversity Conservation Act 1999* and by establishing the Australian Heritage Council, which assesses nominations and advises the Minister on matters relating to National Heritage values.

#### **6.2.5 State Heritage Register**

The State Heritage Register is administered under the *Historic Cultural Heritage Act 1995 (Tasmania)*. The Act is currently under review by the Tasmanian Heritage Council.

The 1995 Act is the primary legislation that governs the management of places of historic cultural significance entered on the Tasmanian Heritage Register. Under the Act, the Tasmanian Heritage Council is the consent authority responsible for considering proposed works. The approach to works is also informed by a series of Heritage Tasmania Practice Notes, which give guidance to owners regarding their responsibilities.

### **6.2.6 Tasman Planning Scheme**

The planning scheme sets out the requirements for use or development within the Tasman Municipality in accordance with the *Land Use Planning and Approvals Act 1993*. Associated plans show how land is zoned and include provisions on how the land can be used or developed. One objective of the scheme is to ensure that use or development in the vicinity of identified cultural and historic sites does not diminish the values associated with those sites. The strongest practical measures exist in relation to places on the local heritage schedule, such as Port Arthur.

The Port Arthur Historic Site is not covered by a local heritage overlay, though all building and planning applications for building and archaeological works at the Port Arthur Historic Site are first lodged with the Tasman Council, which then refers them on to Heritage Tasmania.

Upon the inscription of the Australian Convict Sites on the World Heritage List in July 2010, the *Port Arthur Historic Sites Visual Significance Overlay* was established around the Port Arthur Historic Site under the Tasman Planning Scheme. Under this overlay, PAHSMA will be informed of any discretionary planning applications within the zone, and can make a representation to the Tasman Council in terms of the impacts the proposed works might have on the heritage values of the historic site. The World Heritage values are contained within a 114-hectare area within Port Arthur that is protected under the EPBC Act. This area is screened by forest for site management and operational facilities that are located within a buffer zone. The buffer zone of 1,205 hectares extends to the west and south, encompassing the ridge lines of Mt Arthur, and providing a visual setting and cultural landscape context for the World Heritage Area.

### **6.2.7 Aboriginal Heritage**

The *Aboriginal Relics Act 1975 (Tasmania)* is the statutory framework that provides for the protection of Aboriginal heritage in the state. Pursuant to Section 9(1), no person shall destroy or interfere with a protected item, site, place or precinct except in accordance with the terms of a permit granted by the Director of National Parks and Wildlife.

There is an obligation on PAHSMA to avoid any actions which may lead to the disturbance of sites or relics at Port Arthur, and to halt works if any Aboriginal material is uncovered and refer the matter immediately to the relevant government agency.

While no Aboriginal sites or significance specifically related to the Penitentiary precinct has been identified to date, there is the potential that previously unknown deposits related to the pre-contact occupation of this site could be uncovered during below-ground works. The Statutory Management Plan notes that appropriate protocols and procedures will ensure that such discoveries are

not damaged, disturbed or concealed, and that they will be brought to the attention of the Director of National Parks and Wildlife.

The Statutory Management Plan also notes that Tasmanian Aboriginal Land and Sea Council, an independent community group, should be recognized as the representative body for the Tasmanian Aboriginal community and consulted in the management of Aboriginal cultural heritage values.<sup>99</sup>

### **6.2.8 ICOMOS Charters and UNESCO Conventions**

The following ICOMOS Charters relating to settings, archaeology, historic gardens and structures may also be relevant and useful tools in the management of the Penitentiary precinct:

<http://www.international.icomos.org/charters/xian-declaration.pdf>

[http://www.international.icomos.org/charters/arch\\_e.htm](http://www.international.icomos.org/charters/arch_e.htm)

[http://www.international.icomos.org/charters/gardens\\_e.htm](http://www.international.icomos.org/charters/gardens_e.htm)

[http://www.international.icomos.org/charters/structures\\_e.htm](http://www.international.icomos.org/charters/structures_e.htm)

UNESCO's *Recommendation on International Principles Applicable to Archaeological Excavations*, 1956 (The New Delhi Recommendations) may also be useful for the management of PAHSMA's archaeological resources and processes.

### **6.3 Views of Key Stakeholders**

Formal community consultation was not undertaken in the preparation of the CMP. However, the PAHSMA Community Advisory Committee and PAHSMA staff advised that the Penitentiary and Bakehouse/Kitchen are highly valued as iconic ruins. It would appear that reconstruction is not viewed as appropriate.

Comments and ideas that were expressed in our informal discussions with PAHSMA staff and the Port Arthur Community Advisory Committee included the following –

#### *Generally*

- the site is considered a ruin, not a building,
- the key appeal of the site is the authenticity, and as a dignified and respectful place,
- climate change has impacted on the site,
- water rises above the sea wall a few times each year,

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<sup>99</sup> PAHSMA, Statutory Management Plan (SMP), 2008, p 135. Context, Landscape Management Plan (LMP), 2002, p 65.

- the open space behind the penitentiary ruins [the former ablutions area] is an important space for performances, plays etc, which are held several times a year, there are also occasional performances on the grassed area in front of the penitentiary ruin.
- the penitentiary ruin is the main structure on the site exposed to the elements,

#### *Archaeology*

- artefacts have not all been catalogued,
- the role of archaeology should be more research based rather than confirmation for written history,

#### *Maintenance and Conservation Works*

- some conservation/reconstruction works are not clearly identifiable and some may be speculative and others may provide misleading information,
- the opportunity to undo inappropriate/detrimental earlier repairs and reconstruction should be included in future programs,
- the walkway was a ground breaking installation when installed 30 years ago,
- the design life of the walkway was 15 years (replacement due 1995),
- the walkway is considered to be compromising interpretation and is visually intrusive,
- maintenance budgets need to keep pace with new facilities and infrastructure,
- the Asset Management System has capacity to draw together currently disparate historical information, but will require massive commitment to data input to take advantage of the capacity of the system.

#### *Interpretation and Visitor Experience*

- the site provides an extremely good visitor experience,
- there is good awareness of the Port Arthur site generally, but the familiarity with the extent (a large area with many buildings to visit) of what is at the site is low,
- the landscape/aesthetic values are a particular drawcard for visitors, notably from Asia,
- the penitentiary ruins are tired looking and it is difficult to read the structure and understand what went on in there,
- access to the interior of the ruins is important not only for visual appreciation of the interior spaces but for views from within,
- the original function of the structure was of an industrial nature (granary/mill) and this has not been adequately interpreted,
- there are many components of the extant building fabric which are not clearly understood,
- the current interpretation material is bland,

- currently entry to the ruin is not instructive – people walk in then out without engaging – it is not an informative experience.,

#### *Future Developments*

- the introduction of the power substation under the Champ Street stair should not have occurred, and similar interventions should not be permitted in the precinct,
- ancillary built elements which no longer exist (for example, the fence around the parade ground and the workshops) could be interpreted in a more tangible way,
- consideration should be given to reconstructing some site features such as walling around the parade ground, fountain, tramway, workshops etc.

#### **6.4 Recommendations for further research**

Numerous research and investigative projects have been undertaken on various aspects of the Penitentiary precinct. However, there remains areas where knowledge is lacking and additional research would be beneficial. In addition to these recommendations, reference should also be made to the policy actions identified in Section 7.0, particularly Section 7.11 Archaeology.

In addition, the results of the many research and investigative projects that have been undertaken are rich sources of information that could be integrated to provide a broader understanding of the extant conditions. For instance, the Laser Survey project which has recorded the extant structure in detail has the primary purpose of monitoring movement and assessing structural stability. The information is recorded in a complex computer program with associated data files. It is understood that the laser survey model can be transcribed into an Autocad (or similar CAD program) file. The CAD file of the complete structure would provide accurate plans, elevations and potentially sections which would form the basis of identifying the various works projects that have been undertaken in the past and for future conservation works.

The following areas requiring further investigations and research have been identified as part of this study.

- Mapping of conservation and restoration works undertaken to date based on detailed survey of all reports and drawings recorded in the Chronology [Chin, 2006] that relate to existing conditions. This would assist in a clearer understanding of the extant fabric.
- Full existing conditions drawings – plans, elevations and sections utilising the laser scanning documentation (as described above).

- Detailed analysis and documenting of the buildings (plans and elevations) for the two key development phases –
  - a) Initial construction of flour mill/granary
  - b) Conversion to penitentiary building

There are no plans and elevations known that describe the granary/flour mill when constructed. A graphic representation of the descriptive text would inform an understanding of the operation of the structure and the subsequent alterations when converted to the penitentiary.
- Identify all reconstructed parts of the Penitentiary precinct structures noting those areas that are accurate reconstructions and those that are speculative reconstructions. It is important to inform future research of reconstruction areas that are speculative to avoid misleading information and inaccurate assumptions.
- Commission a Master Plan (as is intended by PAHSMA) for the Penitentiary Precinct. The purpose of this Master Plan will be to provide more detailed direction with issues such as the approaches to site interpretation and treatment of intrusive elements.
- Undertake further research in the ablutions block area of the Penitentiary.
- There is also rich potential for further research in the areas of criminology, engineering, conservation, tourism, photography and architecture.

## **7.0 POLICY**

### **7.1 Introduction**

As stated in the Introduction, this CMP is a second tier report providing specific conservation and management recommendations for the Penitentiary precinct. The overriding document under which the whole site is managed is the Statutory Management Plan (SMP) (2008). Reference should be made to Section 5 of the SMP for overriding Policies and Management Actions.

The Conservation Policy has been developed pursuant to the assessment of the heritage values of the Penitentiary precinct, Port Arthur. The intention of the Conservation Policy is to provide a framework for the future conservation of the heritage values of the place. It can also provide assistance in determining an appropriate interpretation strategy and guiding any proposed changes to the place.

The policy is based on the processes outlined in the Burra Charter - Australia ICOMOS Charter for the Conservation of Places of Cultural Significance. Special reference should be made to the definitions outlined in Articles 1 to 29 of the Burra Charter (refer to Appendix 1), which provides the basis for the terminology used in this policy.

As suggested within the Burra Charter, a preliminary to developing the policy is to consider the factors which may affect the future of the place. Thus, specific factors have been defined and considered in the development of the policy for this place.

### **7.2 General Policy**

An understanding and acknowledgement of attributed heritage values is the basis for appropriate protection of places of heritage significance.

#### *Policy*

The Statement of Heritage Values set out in Section 4.5 is to be accepted as the basis for all future planning. The future conservation and development of the Penitentiary precinct is to be carried out in accordance with the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (*Burra Charter*).

#### *Action*

A copy of this CMP, which includes the *Burra Charter* (Appendix 1), and any updates, is to be kept in a permanent and accessible archive for interested parties, and those responsible for the future care of the place.

Photographic records and dimensioned drawings are to be kept of existing conditions before any changes are undertaken to the existing fabric.

### 7.3 Fabric

In order to maintain the heritage values of the place it is important that the significant building fabric be retained and conserved. The ability to read the original form and components of the building is crucial to appreciating its heritage values.

#### *Policy*

Original building fabric (including archaeological material) is identified as being of **Exceptional significance** and should be retained and conserved. Modifications are generally discouraged, as is reconstruction of the ruins. However, missing, but known original detailing, may be considered for reconstruction if it contributes to the structural stability of the original fabric or is identified as being fundamental to the interpretation of the place.

Reconstructed building fabric is of **High significance** and should be retained. However, some alterations may be considered if necessary for the ongoing stability and conservation of the original building fabric.

Introduced building fabric is of **Limited significance** and may be retained and adapted, but may be removed or replaced with more sympathetic, contemporary fabric.

**Intrusive** building fabric should ultimately be removed, but may be replaced with more sympathetic, contemporary fabric.

#### *Action*

Undertake conservation works where appropriate. When undertaking any works to significant building fabric, adopt the approach of changing as much as necessary but as little as possible

### 7.4 Policies for Specific Components

#### *Penitentiary and Bakehouse/Kitchen ruin*

- Conservation of the original building fabric should be a priority and sufficient funds should be available for these works. The conservation works budget should be identified separately to the annual maintenance budget,
- Structural stability of the ruin should continue to be regularly monitored and remedial works implemented as necessary,
- Public access to most areas of the ruin (as currently exists) should be maintained. Areas of restricted access should be minimised to areas where works are being carried out, or where safety concerns have been identified,

- Reconstruction is generally discouraged for the Penitentiary precinct ruins. However, it may be considered where it is deemed necessary for the structural integrity of the original fabric or in exceptional circumstances for interpretation purposes. Reconstruction must be based on accurate historical information.

#### *Ablutions areas*

- As this area is essentially an archaeological site of potentially high significance, disturbance of the ground surface for other than supervised research and study projects should be minimized.

#### *Watchman's Quarters*

- Conservation of original building fabric should be a priority
- Adaptive reuse may be considered, particularly if new use will contribute to the interpretation of the precinct generally (for example, audio visual display, meeting space for guided tour talks etc),

#### *Demolished or relocated elements*

- Consideration should be given to relocating the fountain to its original site.
- If objects that are known to have been removed from the site (eg. clock, cell doors etc.) are located, it may be appropriate to have them returned to the site.

### **7.5 Setting**

Any compromise to the setting or the presentation of the place by the removal and/or irreversible alterations to building fabric of significance is likely to diminish the heritage values of the place and should be avoided. However, it is noted that the current setting varies significantly to the setting during the flourmill/granary phase and the active penitentiary phase.

#### *Policy*

No new construction, demolition or modification which would adversely affect the setting should be allowed.

#### *Action*

Retain and conserve building fabric of significance. Consideration may be given to reconstruction and/or interpretative interventions on the site to assist in the understanding of the layers of the cultural landscapes that no longer exist.

## 7.6 Future Development

It is recognized that as a ruin the function of the place is limited and that any new development within the precinct will have some negative impact and should therefore be avoided.

### *Policy*

New development within the Penitentiary precinct should only be considered under exceptional circumstances. All additions to the place should respect the heritage values of the existing ruins and reconstructed elements.

### *Action*

If new development is deemed necessary, the first consideration should be given to areas outside/adjacent to the Penitentiary precinct.

## 7.7 Use

The fact that the Penitentiary building is a ruin limits its potential use and future survival of the place will only be secured by means of an appropriate and sustainable use, such as the existing tourism function.

### *Policy*

The current use of the place as a publicly accessible tourist site is appropriate to its heritage values and should be retained. Adaptive reuse is not appropriate for the ruins, however, there is potential for adaptive reuse of the Watchman's Quarters.

### *Action*

It is anticipated that the place will retain its use as a tourist destination. Consideration should be given to improving the visitor experience of the precinct through an appropriate interpretation strategy.

## 7.8 Interpretation & Signage

An increased appreciation of the history and heritage values of the place will improve public awareness and appreciation of the historic fabric and will lead to a greater likelihood of preservation of the heritage values of the place.

### *Policy*

An interpretation strategy for the Penitentiary precinct which relates to the interpretation strategy for the whole site should be prepared and implemented. The interpretation strategy should address the cultural landscape aspects and each period of significance of the place.

*Action*

Prepare and implement an interpretation strategy. It should be consistent with the interpretation of the site as a whole and include a history of the place from a social, historical, technical and architectural perspective, and be multi layered to incorporate the various periods of significance of the place.

**7.9 Environmental Risk**

Due to its close proximity to the water and exposed setting, the Penitentiary precinct is arguably the most vulnerable part of the site in terms of potential environmental risks such as flooding and storm events. These risks need to be properly understood, monitored and measures taken to mitigate risk. This will ultimately assist in the preservation of heritage values.

*Policy*

An assessment of environmental risks, including flooding, storm events, fire, the presence of hazardous materials (such as lead and asbestos), dislodged or deteriorated building fabric and site security should be undertaken on an annual basis.

*Action*

Undertake a risk assessment audit in association with an experienced heritage practitioner and address any deficiencies, and monitor the risk assessment audit on a regular basis.

**7.10 Management and Maintenance**

Maintenance is the simplest, least interventionist, least destructive and most inexpensive form of conservation. It is the responsibility of the owner of the site to maintain building fabric and to recognise that all building fabric will require some form of maintenance. Regular inspections will identify possible areas where building fabric decay is likely to occur and if this is attended to quickly it should preclude the need for expensive remedial works and additional costs.

*Policy*

A person responsible for management of the Penitentiary precinct should continue to prepare dedicated maintenance programs with allocated budgets. The conservation and maintenance managers, in association with a recognised conservation practitioner where required, should prepare, implement and regularly review the maintenance program.

*Action*

The maintenance program should include a regular periodic condition survey undertaken in order to review maintenance and conservation requirements. The Maintenance team of PAHSMA should regularly review the maintenance program as a necessary component to the implementation of this policy.

## 7.11 Archaeology

Policies for the extensive and unique archaeological resources of the granary/penitentiary precinct must address both management and research objectives. While the protection of the physical resources can be achieved by appropriate controls on works and development projects, the research potential of the archaeological resources can only be realised through well-designed enquiries and the proper and full publication of the results of those enquiries. Given that any archaeological research must take account of preceding investigations, the need to complete a review and synthesis of all previous archaeological work conducted at the granary/penitentiary is critical. It is incumbent on PAHSMA to protect and manage not only the remaining in situ resources, but also the records of all archaeological investigations. This is especially the case for those records pertaining to the inherently destructive process of archaeological excavation.

### *Policy*

The principal value of archaeology at Port Arthur relates to its research potential to yield insight into the experiences and life-ways of the people who have inhabited and modified its landscapes. The penitentiary precinct's archaeology talks mainly to the convict system – its structures, organisation, adaptations, and the different experiences of those who lived within it. In managing the precinct's archaeological resources, it must be remembered that these resources are unique, finite and non-renewable, and can contribute information not available from other sources.

### *Action*

#### Research Framework:

Develop a research framework to inform all future archaeological investigations conducted at the granary/penitentiary whether of a monitoring or research nature. This research framework is to operate in conjunction with policy outlined in the PAHSMA Archaeology Plan and/or Research Plan (in prep.). This research framework should identify:

- Coverage and findings of previous archaeological investigations for the granary/penitentiary precinct;
- Data gaps relating to the structure, development, spatial configuration, and operation of the granary/penitentiary precinct;
- Broad upper level research questions that seek to generate new understandings of the development of convict life and industry at site-specific, regional, national and international scales
- Potentials for collaborative research projects involving national and/or international tertiary institutions, organisations and agencies

### Data Synthesis and Data Management:

In order that appropriate research questions can be framed for future investigations, the results of previous work needs to be better understood and made available for wide consultation. This will require, at a site and/or precinct level, the proper synthesis of existing datasets and the consideration of how best to archive and make available those datasets.

- Prepare a comprehensive phasing plan for standing structural elements,
- Complete review and synthesis of all previous archaeological investigations of the granary/penitentiary precinct,
- Ensure accessibility and security of data from previous investigations,
- Prepare and disseminate overview of previous investigations for interpretation and management purposes,
- Complete AMS, Collections and Archaeological Artefact Catalogue database entries (in line with PAHSMA Collections Project timelines),
- Complete characterization and assessment of artefact assemblages (in line with PAHSMA Collections Project timelines).
- Develop archaeological project data collection and archiving standards to ensure that appropriate records are kept in stable formats and environments.

### Archaeological Zoning Plan:

An archaeological zoning plan should be developed that will identify areas of particular research value that would benefit from detailed archaeological investigation. If any new infrastructure cannot be limited to existing impacted areas (see below: New Elements), decisions about its positioning should be informed by the Zoning Plan.

### Methods:

All archaeological work with the granary/penitentiary complex is to conform to, or exceed, the standards established in the PAHSMA Archaeology Procedures Manual.

### New Elements:

The design of new elements required for structural stabilisation and/or visitor services must be preceded by appropriate archaeological investigations, irrespective of how long those may take. Archaeological interventions should be based on realising the archaeological potential of a given area and not merely on salvaging material from the areas of immediate physical impact for planned infrastructure. Where possible new elements should be located in previously investigated/impacted areas (e.g. re-use of existing service trenches) or should be designed so that impacts to sub-surface or structural elements are avoided.

### Management of Archaeological Resources:

To ensure that management decisions are properly informed by all relevant spatial data and related documentation on previous work and identified potential areas should be made available for planning through the PAHSMA Asset Management System.

#### **7.12 Records, Artefacts & Collections**

##### *Policy*

All records, artefacts and collections which have direct associations with the Penitentiary precinct should be indexed, safely stored (preferably on the Port Arthur site) and made available for research purposes.

##### *Action*

Collate existing inventories, indexes and lists relating to the Penitentiary precinct. Maintain a central inventory and update with material as it becomes available.

Ensure all artefacts and collections are appropriately stored in a safe and secure repository.

## SOURCES

### ***National Parks and Wildlife reports***

Brand I nd, *Brand Papers*, bound compilation of transcribed historic records and excerpts from published works and newspapers primarily concerned with the Tasman Peninsula and Port Arthur Penal Establishment.

Crawford, de Bavay & Cripps 1974, 'Report on the Conservation of Building Fabric and Restoration of the Penitentiary at Port Arthur'.

### ***Port Arthur Historic Site Management Authority reports***

Austral Archaeology 1996, 'Archaeological excavations at the Penitentiary bakehouse Port Arthur'. (PEN-8-R)

Chin T 2006, 'The penitentiary, Port Arthur: construction chronology'. (PEN-21-R)

Context Pty Ltd 2002, 'Port Arthur Historic Site Landscape Management Plan'.

Godden McKay Logan (GML) 2000, Conservation Plan Port Arthur Historic Site.

Jackson G nd, 'Notes on Interior Details, Penitentiary'.

Jackman G 2009, 'Penitentiary/Flour Mill Archaeological Interpretation – Preliminary Notes'.

PAHSMA 2003, 'Penitentiary Workshops and Ablutions: Historical Analysis'. (PEN-23-R)

PAHSMA nd, 'Penitentiary Workshops Archaeological Site Report'.

PAHSMA 2008, 'Port Arthur Historic Sites Statutory Management Plan'.

PAHSMA [R Tuffin?] nd, 'Water Reticulation at Port Arthur'.

Scripps L 1997, 'Interpretation Storyline. Precinct 1 The Convict Precinct'.

Scripps L 1997, 'The Penitentiary: A report for the Port Arthur Historic Site'. (PEN-13-R)

Tierney E 2009, 'Notes of Port Arthur's tread wheel: the everlasting staircase, cockchafer, shinscraper or that machine of barbarous age, and excellent punishment for offenders'. (PEN- 24-R)

Tuffin R 2004, 'Penitentiary ablutions block: archaeology report'. (PEN-15-R)

Tuffin R 2003, 'Penitentiary Parade Ground: pictorial timelines', 2003.

**Other secondary sources***Published sources*

Convict Department, Tasmania 1868 (reprint 1991), *Regulations for the Penal Settlement on Tasman's Peninsula*, PAHSMA, Tasmania.

Harrison L 1979, *Flour Mills in South Australia*, Dept of Architecture, University of Adelaide, Adelaide.

Kerr JS 1984, *Design for Convicts*, Library of Australian History, Sydney.

Kerr JS 1988, *Out of Sight, Out of Mind: Australia's Places of Confinement, 1788-1988*, SH Irvine Gallery, National Trust of Australia (NSW), Sydney.

McLaren A 1966, 'Clark, Alexander Russell (1809 - 1894)', *Australian Dictionary of Biography*, Vol 1, p 224.

McMahon A 1967, 'Laing, Henry (1803 - 1842?)', *Australian Dictionary of Biography*, Vol 2, p 71.

Tuffin, R 2004, 'A Monument to Folly?' in *Tasmanian Historical Studies*, Vol 9, pp 124-138.

Young, D 1996, *Making Crime Pay: The Evolution of Convict Tourism in Tasmania*, Tasmanian Historical Research Association, Hobart.

*Unpublished sources*

Australian Govt Jan 2008, Australian Convict Sites World Heritage Nominations, DEWHA, Canberra, ACT.

Martin C 2006, 'Shoemaking and reform agendas at Port Arthur penal station', BA thesis, School of History and Classics, University of Tasmania.

Denholm D 1968, 'The Administration of Port Arthur Penal Settlement, 1830-1844', BA Hons thesis, History Department, University of Adelaide.

HLCD, 'Mortlake Mill Conservation Management Plan', 2004, pp 43-45.

McLaren A 2003, 'Clark family background', <http://www.utas.edu.au/clark/familytree.html>, accessed 02/11/2010.

**Maps and plans***Copies held by PAHSMA*

NB: The following list is not exhaustive, but contains the plans and maps found useful in preparing this report.

J.W. Hughes 1833, 'The Settlement of Port Arthur'. (PAHSMA ref. HM 1833/1)

1836, 'Plan of Settlement: Port Arthur', tracing of 1950s. (PAHSMA ref. HM 290/1459)

c.1841, 'Sketch of Site for the Proposed new Penitentiary of Port Arthur'. (PAHSMA ref. HM vol.78/1-4)

Henry Laing c1841, 'Design for a Corn Mill proposed to be erected at Port Arthur'. (PAHSMA refs. HB-290/1482, HB-290/1483, HB290-1487 & HB-290/1488)

1846, 'Plan of the Penal Settlement at Port Arthur'. (PAHSMA ref HM 1846/1)

1854, Jan., 'Plan of the Penal Settlement. Port Arthur'. (PAHSMA ref. HM MPG 537/2)

c.1864, 'Port Arthur, Plan of Penitentiary, Sections and Elevations' (PAHSMA refs. & HB-P-1). NB: Higher quality versions of these two plans are found online at the Archives Office of Tasmania.

*Maps and plans from other sources*

1863, 'Block Plan of the Settlement of Port Arthur'. Archives Office of Tasmania, ref. PWD266-1-1775

c1864, 'Port Arthur Plan of Penitentiary. Sections and Elevations'. Archives Office of Tasmania, refs. PWD266-1-1778, PWD266-1-1779 & PWD266-1-2009

***Photographs and images***

*Penitentiary Images held at PAHSMA in Historic Images Collection*

NB: The photo list below is not exhaustive, as there are also other general views of Port Arthur that show the Penitentiary precinct in context.

Accession no.	Description	Date of image	Photographer / Artist	Source
1000	Penitentiary Exterior - eastern end elevation	1973		Dept. of Film Production
1001	Penitentiary Exterior - kitchen northern elevation	1973		Dept. of Film Production
1002	Penitentiary Exterior - kitchen western elevation	1973		Dept. of Film Production
1003	Penitentiary Exterior - close up of 6 windows	1973		Dept. of Film Production
1004	Penitentiary Exterior - chapel wing southern elevation	1973		Dept. of Film Production
1005	Penitentiary Exterior -	1973		Dept. of Film

Accession no.	Description	Date of image	Photographer / Artist	Source
	tower northern elevation			Production
1006	Penitentiary Interior - kitchen	1976		Crawford, DeBavay & Cripps
1007	Penitentiary Exterior - bakehouse western elevation	1976		Crawford, DeBavay & Cripps
1008	Penitentiary Interior - kitchen	1976		Crawford, DeBavay & Cripps
1009	Penitentiary Exterior - closeup partially collapsed wall	1976		Crawford, DeBavay & Cripps
1011	Penitentiary Exterior - closeup burnt & collapsing lintel	17/03/1972		Crawford, DeBavay & Cripps
1012	Penitentiary Exterior - cell block west northern elevation	1973		Dept. of Film Production
1013	Penitentiary Exterior - cell block west southern elevation	1973		Dept. of Film Production
1014	Penitentiary Exterior - chapel wing southwestern corner	1973		Dept. of Film Production
1015	Penitentiary Exterior - bakehouse south elevation & chimney	1973		Dept. of Film Production
1016	Penitentiary Exterior - bakehouse southern elevation view east	1973		Dept. of Film Production
1017	Penitentiary Exterior - cell block northern elevation	1973		Dept. of Film Production
1018	Penitentiary Interior - cell block west	17/03/1972		
1019	Penitentiary Exterior - cell block east northern elevation	1973		Dept. of Film Production
1020	Penitentiary Exterior - bakehouse southern elevation view west	1973		Dept. of Film Production
1021	Penitentiary Exterior - bakehouse southern elevation view north	1973		Dept. of Film Production
1022	Penitentiary Exterior - bakehouse southern	1973		Dept. of Film Production

Accession no.	Description	Date of image	Photographer / Artist	Source
	elevation view north			
1023	Penitentiary Exterior - cell block east unstable corner stack	17/03/1972		
1024	Penitentiary Exterior - cell block east northern elevation	17/03/1972		
1025	Penitentiary Exterior - cell block west southern elevation			
1026	Penitentiary Exterior - cell block west northern face & tower	12/06/1964	J. Thwaites	
1027	Penitentiary Exterior - chapel wing southern elevation			
1030	Penitentiary Exterior - pre fire southern elevation	pre 1897		NPWS Scrap book no. 12
1032	Penitentiary Exterior - northern elevation & tower interior	8/1/1898	W. Williamson	Tasmanian Mail 8/1/1898 p.19 & The Australian 15/1/1898 p.141
1034	Penitentiary Exterior - pre fire southern face, much vegetation	pre 1897		
1036	Penitentiary Exterior - pre fire southern elevation, Watchmans	1885-1897	Albert Sargeant	NPWS Scrap book no. 15
1038	Penitentiary Exterior - cell block east, with Aboriginal visitors	1/05/1935		Walkabout 1/5/1935
1045	Penitentiary Interior - bakehouse oven doors, wooden ceiling	pre 1897	Beattie ?	
1052	Penitentiary Interior - cell block east western elevation	1973		Dept. of Film Production
1053	Penitentiary Exterior - northern elevation & tower interior	1973		Dept. of Film Production
1054	Penitentiary Interior - scaffolding supporting wall	1973		Dept. of Film Production

Accession no.	Description	Date of image	Photographer / Artist	Source
1055	Penitentiary Interior - scaffolding supporting walls	1973		Dept. of Film Production
1056	Penitentiary Exterior - close up of brick erosion & window	1973		Dept. of Film Production
1057	Penitentiary Interior - cell with ferns	1973		Dept. of Film Production
1059	Penitentiary Exterior - cell block west northern elevation & tower	pre 1897		
1060	Penitentiary Exterior - cell block west northern elevation & tower	17/03/1972		
1061	Penitentiary Exterior - crack in wall stack			
1062	Penitentiary Exterior - closeup burnt & collapsing lintel	17/03/1972		
1063	Penitentiary Exterior - Champ Street retaining wall	1973		Dept. of Film Production
1064	Penitentiary Exterior - Boxing Day sports on parade ground	c.1930		B. Cramp album
1065	Penitentiary Exterior - cell block southern elevation			Ash Beater postcard, AB Series 53
1066	Penitentiary Exterior - cell block southern elevation	9/01/1966	John Thompson	
1067	Penitentiary Exterior - cell block southern elevation	27/04/1924	Jack Gibson	A & D Shearman collection
1068	Penitentiary Exterior - bakehouse & chimney southern elevation	28/04/1924	Jack Gibson	A & D Shearman collection
1070	Penitentiary Interior - entrance hall	pre 1897	Anson	NPWS Scrap book no. 28
1071	Penitentiary Interior - bakehouse oven doors, with man	c.1920s		Greg Hind collection

Accession no.	Description	Date of image	Photographer / Artist	Source
1072	Penitentiary Interior - entrance hall & northern cell corridor	pre 1897	Anson	
1073	Penitentiary Interior - cell corridor	pre 1897	Anson	NPWS Scrap book no. 32
1074	Penitentiary Interior - cell corridor, with brick rubble	1880s		
1075	Penitentiary Interior - cell block east unstable corner stack	1973		Dept. of Film Production
1076	Penitentiary Interior - cell corridor	1877-1880s	Anson	NPWS Scrap book no. 30
1077	Penitentiary Interior - cell corridor	1880s		
1078	Penitentiary Interior - cell from doorway	1880s		
1079	Penitentiary Interior - dining room, with chairs	1880s		
1080	Penitentiary Interior - dining room	1880s	Albert Sargeant	NPWS Scrap book no. 9
1081	Penitentiary Interior - entrance hall and southern wing cells		Beattie	Ralph D. Tapping
1082	Penitentiary Interior - dining room & interior face of clock	1880s		Archives Office of Tasmania
1083	Penitentiary Interior - top floor with rafters	1880s		
1084	Penitentiary Interior - cell corridor, rubble on floor	1880s		State Library of Victoria H22655
1085	Penitentiary Interior - library room	1880s		
1086	Penitentiary Interior - top floor with rafters	1880s		
1087	Penitentiary Interior - dining room	1880s		
1088	Penitentiary Interior - entrance hall and southern wing cells	1880s		Tasmanian Museum and Art Gallery
1089	Penitentiary Interior - cell	1880s	Anson	Mitchell Library

Accession no.	Description	Date of image	Photographer / Artist	Source
1090	Penitentiary Interior - dining room, with visitors	1880s		Greg Hind Hindsight photocards
1091	Penitentiary Interior - entrance hall and cell corridor	1880s		Archives Office of Tasmania. Also Greg hind collection
1092	Penitentiary Interior - dining room, library door visible	1880s		Archives Office of Tasmania
1322	Penitentiary Exterior - plan	Post 1857		Mitchell Library
1368	Penitentiary Exterior - close up of water wheel, from 1369	1848		Tasmanian Museum and Art Gallery
1369	Penitentiary Exterior - flour mill northern elevation	1848		Tasmanian Museum and Art Gallery
1518	View from Scorpion Rock			
2040	Penitentiary Exterior - southern elevation ruin		D.I.C. - no.15	Archives Office of Tasmania
2042	Penitentiary Exterior - eastern elevation with watchmans	c.1930s		Archives Office of Tasmania
2043	Penitentiary Exterior - chapel wing southern face	c.1930s		Archives Office of Tasmania
2044	Penitentiary Interior - cell corridor, brick rubble on floor	1880s	T. Crawford, postcard supplier	Archives Office of Tasmania Or Mitchell Library
2045	Penitentiary Interior - entrance hall and cell corridor	1880s	Anson	Archives Office of Tasmania
2046	Penitentiary Interior - cells	1880s		Archives Office of Tasmania
2048	Penitentiary Exterior - southern elevation with visitors	c.1910s		Archives Office of Tasmania
2049	Penitentiary Interior - with visitors	c.1910s		Archives Office of Tasmania
2120	Penitentiary Interior - with walkway and visitors	1970s		National Parks and Wildlife Service
2328	Penitentiary Interior -	1921	Cooper	Tasmanian Museum

Accession no.	Description	Date of image	Photographer / Artist	Source
	cell block corridor			and Art Gallery
2373	Penitentiary Exterior - southern elevation ruin	c.1930s	H.J.H. - no.157	Tasmanian Museum and Art Gallery
2421	Penitentiary Exterior - southern elevation ruin	c.1940s		Tasmanian Museum and Art Gallery
2566	Penitentiary Interior - with visitors	c.1930s		
2615	Penitentiary Exterior - eastern end with tennis court	c.1910s		Crawford, DeBavay & Cripps
2618	Penitentiary Exterior - southern & chapel wing elevation	c.1950s	Jack Thwaites	
2788	Penitentiary Exterior - northern elevation with tennis court	c.1930s		Derek Reid Port Arthur Collection
2845	Penitentiary Interior - kitchen fireplaces with hoist	1880s		Mitchell Library
2913	Penitentiary Exterior - northern elevation with tennis court	c.1930s		Hobart Maritime Museum
2921	Penitentiary Exterior - northern elevation, sketch	1/12/1926	J.C. Goodhart	Illustrated Tasmanian Mail Xmas 1926
2934	Penitentiary Interior - entrance hall and cell corridor and Separate Prison 'B' wing	1/1/1890	J.R. Ashton or F.A. Sleaf	Supplement to the Illustrated Australian News and Musical times
2982	Penitentiary Exterior - northern elevation with fence along creek	c.1930s		Mitchell Library
3004	Penitentiary Exterior - southern elevation view west	1900s	Sergeant ?	Geoff Lennox
3006	Penitentiary Interior - dining room	1880s		
3089	Penitentiary Exterior - southern elevation view east, visitors	c.1920	C. Erikson	Les & June Doyle collection
3090	Penitentiary Interior - cell	c.1920	C. Erikson	Les & June Doyle collection

Accession no.	Description	Date of image	Photographer / Artist	Source
3097	Penitentiary Interior - cell corridor, brick rubble on floor	1880s	Anson ?	Archives Office of Tasmania Or Mitchell Library

### ***Photographs and images from other sources***

Prout JS, 1845, sketch 'The settlement, Port Arthur, V.D.L., from the commandant's residence, May 20, 1845', National Library of Australia, nla.pic-an2479033.

c1860s (retraced 1917), watercolour 'Port Arthur, Van Diemens Land, Imperial Convict Settlement', Archives Office of Tasmania, ref. PWD266-1-1996.

c1880s, 'Bakehouse Penitentiary, Port Arthur', State Library of Tasmania, image NS1013-1-1645

c1880, 'Penitentiary – Port Arthur', State Library of Tasmania, image AUTAS001126184118

Anson Bros c1889, 'Fountain, front of Penitentiary, Port Arthur', State Library of Tasmania, image AUTAS001125643049

c1950, photo of Penitentiary from north-east, Archives Office of Tasmania, ref. AB713-1-4045

c1970, postcard 'The Penitentiary, Port Arthur', State Library of Victoria, image H90.25/109

Portrait of Alexander Clark, taken in Hobart, nd., University of Tasmania website, Clark Family Tree, <http://www.utas.edu.au/clark/familytree.html>.

Sketch of Walker's Mill, Hobart. University of Tasmania website, Clark Family Tree, <http://www.utas.edu.au/clark/familytree.html>

## **APPENDICES**

**APPENDIX 1 - The Australia ICOMOS *Burra Charter***

The Australia ICOMOS

## **GUIDELINES FOR THE CONSERVATION OF PLACES OF CULTURAL SIGNIFICANCE**

Known as

### ***THE BURRA CHARTER***

#### **PREAMBLE**

Considering the International Charter for the Conservation and Restoration of Monuments and Sites (Venice, 1964), and the Resolutions of the 5th General Assembly of the International Council on Monuments and Sites (ICOMOS) (Moscow 1978), the Burra Charter was adopted by Australia ICOMOS (the Australian National Committee of ICOMOS) on 19 August 1979 at Burra, South Australia. Revisions were adopted on 23 February 1981, 23 April 1988 and 26 November 1999.

#### **ARTICLES**

##### **ARTICLE 1. DEFINITIONS**

For the purposes of this Charter:

- 1.1 **Place** means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.
- 1.2 **Cultural significance** means aesthetic, historic, scientific, social or spiritual value for past, present or future generations. Cultural significance is embodied in the *place* itself, its *fabric*, *setting*, *use*, *associations*, *meanings*, records, *related places* and *related objects*.
- 1.3 **Fabric** means all the physical material of the *place* including components, fixtures, contents and objects.
- 1.4 **Conservation** means all the processes of looking after a *place* so as to retain its *cultural significance*.
- 1.5 **Maintenance** means the continuous protective care of the *fabric* and *setting* of a *place*, and is to be distinguished from repair. Repair involves *restoration* or *reconstruction*.
- 1.6 **Preservation** means maintaining the *fabric* of a *place* in its existing state and retarding deterioration.
- 1.7 **Restoration** means returning the existing *fabric* a *place* to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.
- 1.8 **Reconstruction** means returning a *place* to a known earlier state and is distinguished from *restoration* by the introduction of new material into the *fabric*.

- 1.9 **Adaptation** means modifying a *place* to suit the existing use or a proposed use.
- 1.10 **Use** means the functions of a *place*, as well as the activities and practices that may occur at the *place*.
- 1.11 **Compatible use** means a *use* which respects the *cultural significance* of a *place*. Such a use involves no, or minimal, impact on cultural significance.
- 1.12 **Setting** means the area around a *place*, which may include the visual catchment.
- 1.13 **Related place** means a *place* that contributes to the *cultural significance* of another *place*.
- 1.14 **Related object** means an object that contributes to the *cultural significance* of a *place* but is not at the *place*.
- 1.15 **Associations** mean the special connections that exist between people and a *place*.
- 1.16 **Meanings** denote what a *place* signifies, indicates, evokes or expresses.
- 1.17 **Interpretation** means all the ways of presenting the *cultural significance* of a *place*.

## CONSERVATION PRINCIPLES

### ARTICLE 2. CONSERVATION AND MANAGEMENT

- 2.1 *Places of cultural significance* should be conserved.
- 2.2 The aim of *conservation* is to retain the *cultural significance* of a *place*.
- 2.3 *Conservation* is an integral part of good management of *places of cultural significance*.
- 2.4 *Places of cultural significance* should be safeguarded and not put at risk or left in a vulnerable state.

### ARTICLE 3. CAUTIOUS APPROACH

- 3.1 *Conservation* is based on a respect for the existing *fabric, use, associations* and *meanings*. It requires a cautious approach of changing as much as necessary but as little as possible.
- 3.2 Changes to a *place* should not distort the physical or other evidence it provides, nor be based on conjecture.

### ARTICLE 4. KNOWLEDGE, SKILLS AND TECHNIQUES

- 4.1 *Conservation* should make use of all the knowledge, skills and disciplines which can contribute to the study and care of the *place*.

- 4.2 Traditional techniques and materials are preferred for the conservation of significant *fabric*. In some circumstances modern techniques and materials which offer substantial conservation benefits may be appropriate.

#### ARTICLE 5. VALUES

- 5.1 *Conservation of a place* should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others.
- 5.2 Relative degrees of *cultural significance* may lead to different *conservation* actions at a *place*.

#### ARTICLE 6. BURRA CHARTER PROCESS

- 6.1 The *cultural significance* of a *place* and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions. Understanding *cultural significance* comes first, then development of policy and finally management of the *place* in accordance with the policy.
- 6.2 The policy for managing a *place* must be based on an understanding of its *cultural significance*.
- 6.3 Policy development should also include consideration of other factors affecting the future of a *place* such as the owner's needs, resources, external constraints and its physical condition.

#### ARTICLE 7. USE

- 7.1 Where the use of a *place* is of *cultural significance* it should be retained.

#### ARTICLE 8. SETTING

*Conservation* requires the retention of an appropriate visual *setting* and other relationships that contribute to the *cultural significance* of the *place*.

New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.

#### ARTICLE 9. LOCATION

- 9.1 The physical location of a *place* is part of its *cultural significance*. A building, work or other component of a *place* should remain in its historical location. Relocation is generally unacceptable unless this is the sole practical means of ensuring its survival.
- 9.2 Some buildings, works or other components of *places* were designed to be readily removable or already have a history of relocation. Provided such buildings, works or other components do not have significant links with their present location, removal may be appropriate.

- 9.3 If any building, work or other component is moved, it should be moved to an appropriate location and given an appropriate *use*. Such action should not be to the detriment of any *place of cultural significance*.

#### ARTICLE 10. CONTENTS

Contents, fixtures and objects which contribute to the *cultural significance* of a *place* should be retained at that place. Their removal is unacceptable unless it is the sole means of ensuring their security and *preservation*: on a temporary basis for treatment or exhibition for cultural reasons: for health and safety: or to protect the *place*. Such contents, fixtures and objects should be returned where circumstances permit and it is culturally appropriate.

#### ARTICLE 11. RELATED PLACES AND OBJECTS

The contribution which *related places* and *related objects* make to the *cultural significance* of the *place* should be retained.

#### ARTICLE 12. PARTICIPATION

*Conservation, interpretation* and management of a *place* should provide for the participation of people for whom the *place* has special *associations* and *meanings*, or who have social, spiritual or other cultural responsibilities for the *place*.

#### ARTICLE 13. CO-EXISTENCE OF CULTURAL VALUES

Co-existence of cultural values should be recognised, respected and encouraged, especially in cases where they conflict.

### **CONSERVATION PROCESSES**

#### ARTICLE 14. CONSERVATION PROCESSES

*Conservation* may, according to circumstance, include the processes of: retention or reintroduction of a *use*: retention of *associations* and *meanings*: *maintenance, preservation, restoration, reconstruction, adaptation* and *interpretation*: and will commonly include a combination of more than one of these.

#### ARTICLE 15. CHANGE

- 15.1 Change may be necessary to retain *cultural significance*, but is undesirable where it reduces cultural significance. The amount of change to a *place* should be guided by the *cultural significance* of the place and its appropriate *interpretation*.
- 15.2 Changes which reduce *cultural significance* should be reversible, and be reversed when circumstances permit.
- 15.3 Demolition of significant *fabric* of a *place* is generally not acceptable. However, in some cases minor demolition may be appropriate as part of *conservation*. Removed significant fabric should be reinstated when circumstances permit.

- 15.4 The contributions of all aspects of *cultural significance* of a *place* should be respected. If a *place* includes *fabric, uses, associations* or *meanings* of different periods, or different aspects of *cultural significance*, emphasising or interpreting one period or aspect at the expense of another can only be justified when what is left out, removed or diminished is of slight *cultural significance* and that which is emphasised or interpreted is of much greater *cultural significance*.

#### ARTICLE 16. MAINTENANCE

*Maintenance* is fundamental to conservation and should be undertaken where *fabric* is of *cultural significance* and its maintenance is necessary to retain that *cultural significance*.

#### ARTICLE 17. PRESERVATION

*Preservation* is appropriate where the existing *fabric* or its condition constitutes evidence of *cultural significance*, or where insufficient evidence is available to allow other *conservation* processes to be carried out.

#### ARTICLE 18. RESTORATION AND RECONSTRUCTION

*Restoration* and *reconstruction* should reveal culturally significant aspects of the *place*.

#### ARTICLE 19. RESTORATION

*Restoration* is appropriate only if there is sufficient evidence of an earlier state of the *fabric*.

#### ARTICLE 20. RECONSTRUCTION

20.1 *Reconstruction* is appropriate only where a *place* is incomplete through damage or alteration, and only where there is sufficient evidence to reproduce an earlier state of the *fabric*. In rare cases, reconstruction may also be appropriate as part of a *use* or practice that remains the *cultural significance* of the *place*.

20.2 *Reconstruction* should be identifiable on close inspection or through additional *interpretation*.

#### ARTICLE 21. ADAPTATION

21.1 *Adaptation* is acceptable only where the adaptation has minimal impact on the *cultural significance* of the *place*.

21.2 *Adaptation* should involve minimal change to significant fabric, achieved only after considering alternatives.

#### ARTICLE 22. NEW WORK

22.1 New work such as additions to the *place* may be acceptable where it does not distort or obscure the *cultural significance* of the *place*, or detract from its *interpretation* and appreciation.

22.2 New work should be readily identifiable as such.

## ARTICLE 23. CONSERVING USE

Continuing, modifying or reinstating a significant *use* may be appropriate and preferred forms of *conservation*.

## ARTICLE 24. RETAINING ASSOCIATIONS AND MEANINGS

- 24.1 Significant *associations* between people and a *place* should be respected, retained and not obscured. Opportunities for the *interpretation*, commemoration and celebration of these associations should be investigated and implemented.
- 24.2 Significant *meanings*, including spiritual values, of a *place* should be respected. Opportunities for the continuation or revival of these meanings should be investigated and implemented.

## ARTICLE 25. INTERPRETATION

The *cultural significance* of many *places* is not readily apparent, and should be explained by *interpretation*. Interpretation should enhance understanding and enjoyment, and be culturally appropriate.

## CONSERVATION PRACTICE

### ARTICLE 26. APPLYING THE BURRA CHARTER PROCESS

- 26.1 Work on a *place* should be preceded by studies to understand the *place* which should include analysis of physical, documentary, oral and other evidence, drawing on appropriate knowledge, skills and disciplines.
- 26.2 Written statements of *cultural significance* and policy for the *place* should be prepared, justified and accompanied by supporting evidence. The statements of significance and policy should be incorporated into a management plan for the *place*.
- 26.3 Groups and individuals with *associations* with a *place* as well as those involved in its management should be provided with opportunities to contribute to and participate in understanding the *cultural significance* of the *place*. Where appropriate they should also have opportunities to participate in its *conservation* and management.

### ARTICLE 27. MANAGING CHANGE

- 27.1 The impact of proposed changes on the *cultural significance* of a *place* should be analysed with reference to the statement of significance and the policy for managing the *place*. It may be necessary to modify proposed changes following analysis to better retain *cultural significance*.
- 27.2 Existing *fabric*, *use*, *associations* and *meanings* should be adequately recorded before any changes are made to the *place*.

## ARTICLE 28. DISTURBANCE OF FABRIC

- 28.1 Disturbance of significant *fabric* for study, or to obtain evidence, should be minimised. Study of a *place* by any disturbance of the fabric, including archaeological excavation, should only be undertaken to provide data essential for decisions on the *conservation* of the *place*, or to obtain important evidence about to be lost or made inaccessible.
- 28.2 Investigation of a *place* which requires disturbance of the *fabric*, apart from that necessary to make decisions, may be appropriate provided that it is consistent with the policy for the *place*. Such investigation should be based on important research questions which have potential to substantially add to knowledge, which cannot be answered in other ways and which minimises disturbance of significant fabric.

## ARTICLE 29. RESPONSIBILITY FOR DECISIONS

The organisations and individuals responsible for management decisions should be named and specific responsibility taken for each such decision.

## ARTICLE 30. DIRECTION, SUPERVISION, AND IMPLEMENTATION

Competent direction and supervision should be maintained at all stages, and any changes should be implemented by people with appropriate knowledge and skills.

## ARTICLE 31. DOCUMENTING EVIDENCE AND DECISIONS

A log of new evidence and additional decisions should be kept.

## ARTICLE 32. RECORDS

- 32.1 The records associated with the *conservation* of a *place* should be placed in a permanent archive and made publicly available, subject to the requirements of security and privacy, and where this is culturally appropriate.
- 32.2 Records about the history of a *place* should be protected and made publicly available, subject to requirements of security and privacy, and where this is culturally appropriate.

## ARTICLE 33. REMOVED FABRIC

Significant *fabric* which has been removed from a *place* including contents, fixtures and objects, should be catalogued, and protected in accordance with its *cultural significance*.

Where possible and culturally appropriate, removed significant fabric including contents, fixtures and objects, should be kept at the *place*.

## ARTICLE 34. RESOURCES

Adequate resources should be provided for conservation.

## **APPENDIX 2 - Collections List**

## COLLECTIONS RELATED TO PENITENTIARY PRECINCT

The following list of objects provenanced to the Penitentiary precinct held in collections in Tasmania was prepared by Jody Steele. It should be noted that there are many items excavated during digs in the Penitentiary precinct that are stored at Port Arthur by PAHSMA, but have not yet been catalogued.

### Port Arthur Collection

Accession number	Description
1990.8	Minute Book – Library and Reading Room
1996.27	Photo of Mess Room, by Beattie
1996.8	Book from Library with Rules
1997.345	Book – Public Library, Port Arthur
1997.349	Book – Public Library, Port Arthur
1997.380	Book – Bible
2005.67	Book
2006.152	Book

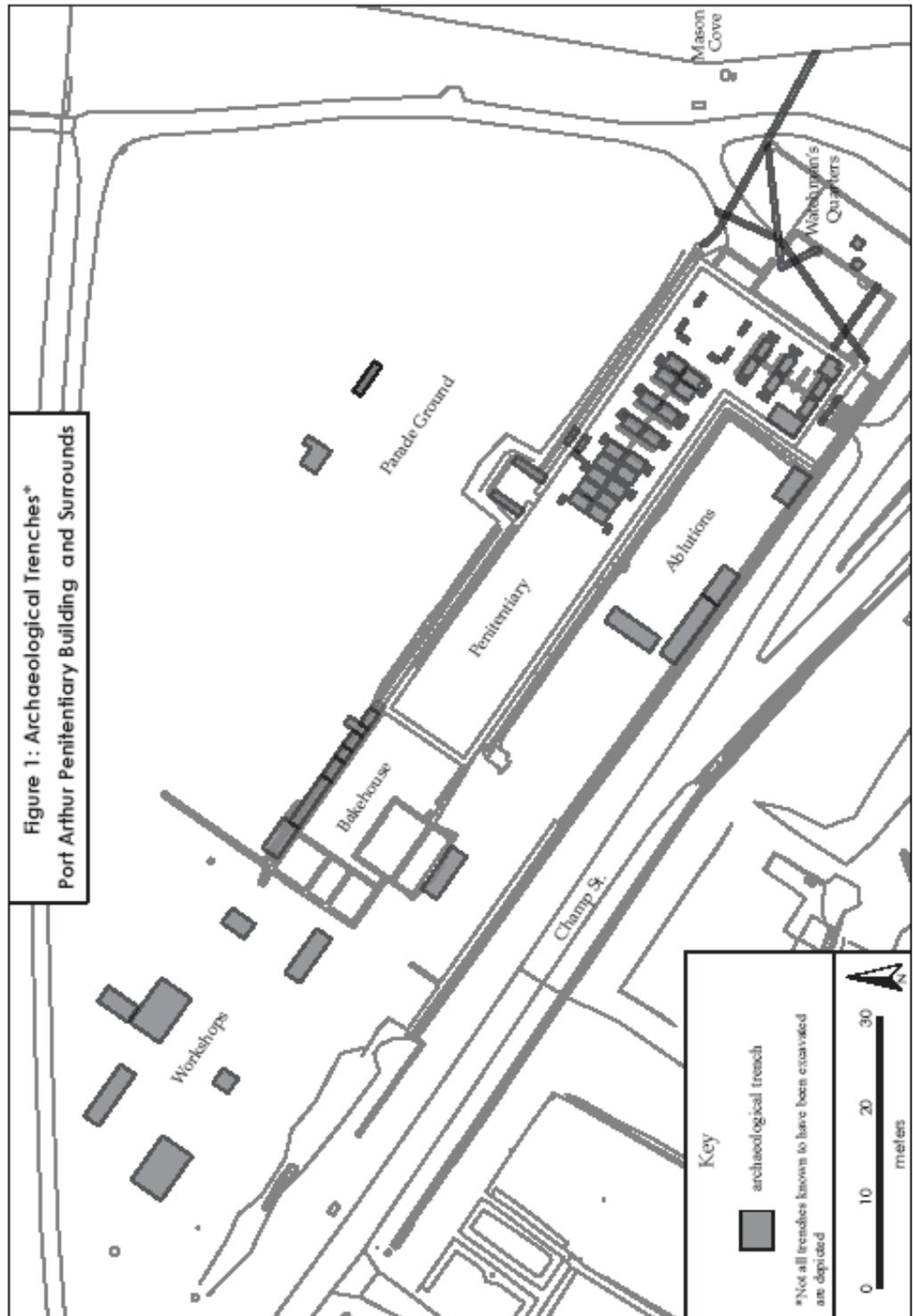
### Tasmanian Museum and Art Gallery

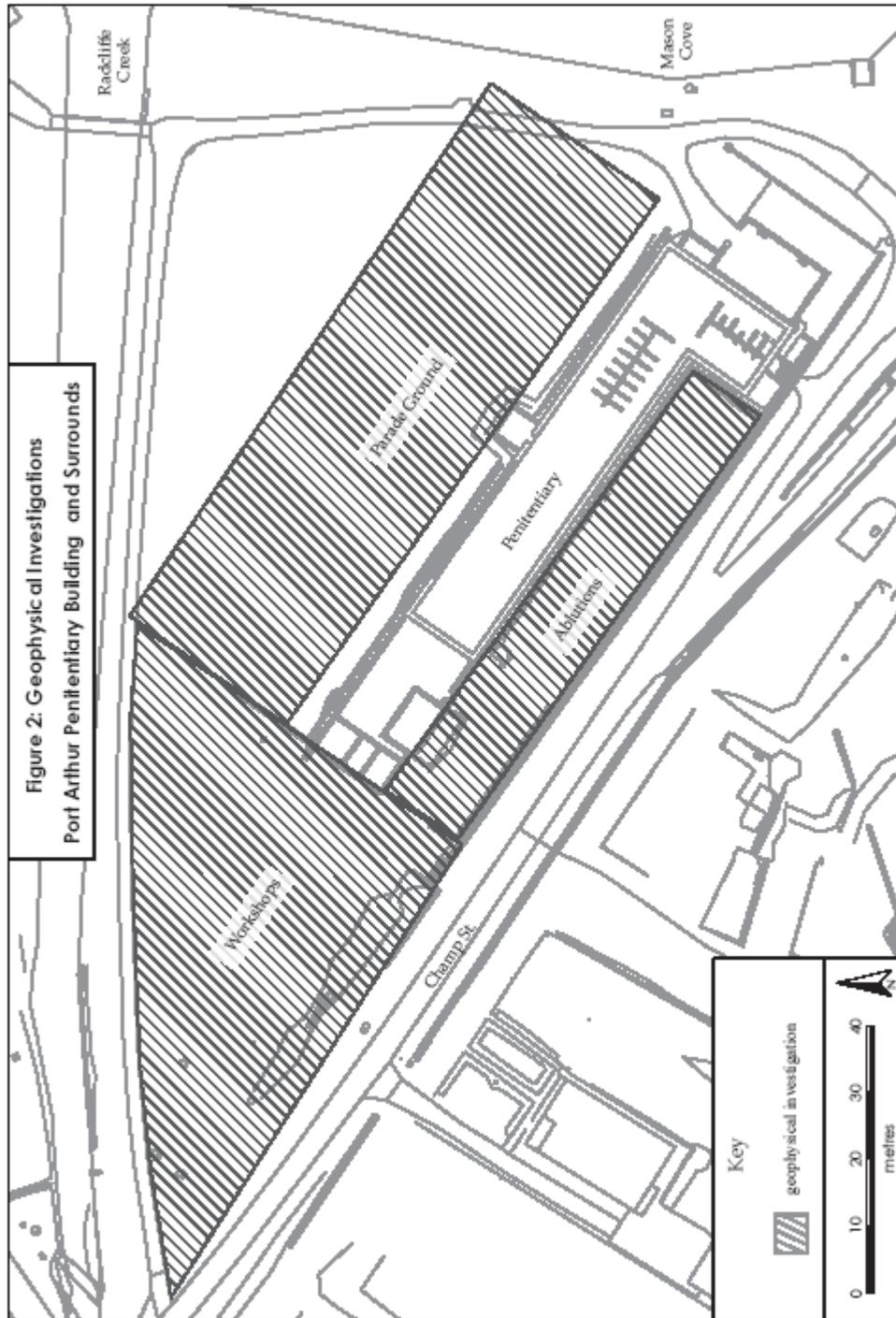
Accession number	Description
5568	Penitentiary key
5947	Penitentiary lock
5948	Rim lock or case lock

### Queen Victoria Museum and Art Gallery

Description
Cell signal table – Penitentiary No 2/3
Board
Cell door

### **APPENDIX 3 - Archaeology Lists**





**Table 1: Principle Findings, Archaeological Investigations of Penitentiary, 1976-2010**

Project ID. /Year	Description	Findings	Collections	Reference
<b>Penitentiary</b>				
1976	Two trenches by Maureen Byrne in 1976 to investigate waterwheel footings.	<ul style="list-style-type: none"> <li>Field notes, drawings etc. not located</li> </ul>	Not known	Not known
1977	Multiple trenches excavated by Crosby (1978) and Orme (1978) within cells and cell corridors prior to installation of overhead walkway	<ul style="list-style-type: none"> <li>Granary floor composed of flaked stone set in compacted sandy clay</li> <li>Items of ferrous hardware and cell signaling mechanisms recovered</li> </ul>	<p>Crosby 1978 – 2 medium boxes</p> <p>Orme 1978 – 5 medium and 1 small box</p>	<p>Crosby, Eleanor, 1978, <i>Archaeological Work on the Penitentiary, Port Arthur: A Report to the National Parks and Wildlife Service of Tasmania.</i></p> <p>Orme, Zuzana, 1978, <i>Excavation at the Penitentiary in Port Arthur. An Archaeological Report to The National Parks and Wildlife Service of Tasmania</i>, by, July, 1978</p> <p>Orme, Zuzana, 1978, <i>Excavation at the Penitentiary in Port Arthur. An Archaeological Report to The National Parks and Wildlife Service of Tasmania</i>, by, September, 1978.</p>
1983	Excavations of footings of Penitentiary tower to facilitate stabilization	<ul style="list-style-type: none"> <li>Bay reclamation for pre-Granary cove shorelines used Blue Gum logs (approx. 1.5m diameter) laid on edge with infilling behind.</li> <li>Instability of resulting ground resulted in rotation of tower. Underpinned and stabilized 1983.</li> </ul>	N/A	Morrison, Richard, n.d., Email correspondence with Greg Jackman re: penitentiary tower underpinning. PAHSMA document No: C11898, 14-PEN

Project ID. /Year	Description	Findings	Collections	Reference
1990	Photogrammetrical recording by Hydro Electric Commission of interior of selected cells		N/A	Images on file in PAHSMA File M2/66/9 (11) 18/12.
95/01 96/01	Eight trenches excavated along northern exterior wall of the Bakehouse.	<ul style="list-style-type: none"> <li>• Bakehouse northern wall footings consist of large logs, planed on dorsal surface, and laid end on.</li> <li>• Recovery of looped leather strap &amp; wooden chock apparently used to maneuver logs into position.</li> <li>• In one 10m section of wall, footings did not consist of logs but instead compacted lime mortar and dolerite gravels</li> <li>• Trench for footing logs dug into a reclamation layer of sandy clay.</li> </ul>	1 medium box	<p>Austral Archaeology, 1995, <i>Archaeological Excavations at the Military Barracks Compound and Penitentiary, Port Arthur</i>. Report for Port Arthur Historic Site Management Authority.</p> <p>Austral Archaeology, 1996, <i>Archaeological Monitoring During Underpinning of the Penitentiary Bakehouse Northern Exterior Wall, Port Arthur</i>. Report for Port Arthur Historic Site Management Authority.</p> <p>Austral Archaeology, 1996, <i>Archaeological Investigations at the Penitentiary Bakehouse, Port Arthur</i>. Report to Port Arthur Historic Site Management Authority.</p>
98/06	Analysis by Jackman (1998) of photographic and physical evidence of internal wall and paint finishes	<ul style="list-style-type: none"> <li>• Identification of plaster colors and finishes within corridor and entrance areas of Penitentiary (Jackman 1998).</li> </ul>	N/A	Jackman, Greg, 1998, Notes on Interior Finishes of Penitentiary. On file in PAHSMA Resource Centre.
2009	Analysis by Jackman (2009) of in situ evidence of flourmill configuration and conversion to Penitentiary.	<ul style="list-style-type: none"> <li>• Conversion from granary/flourmill to penitentiary involved significant modifications to flooring heights and window piercings (Jackman 2009).</li> </ul>	N/A	Jackman, Greg, 2009, <i>C18820_Penitentiary/Flourmill Archaeological Interpretation - Preliminary Notes</i> . On file in PAHSMA Resource Centre.

Project ID. /Year	Description	Findings	Collections	Reference
<b>Watchhouse</b>				
81/05 89/02 90/01	Multiple trenches excavated by Morrison (1981), Ross (1994), McIlroy (1989) and Piper (n.d.) within courtyard and buildings	<ul style="list-style-type: none"> <li>• Logs possibly underpinning penitentiary eastern walls</li> <li>• Stone flagging to north of Watchman's Quarters entrance</li> <li>• Locations of Watchman's courtyard drains</li> </ul>	Piper 1990 – 18 medium boxes and 1 small box	<p>Morrison, Richard, 1981, Field notes on file PAHSMA file M2/66/277 (2) 81/05 (1-13)</p> <p>McIlroy, Jack, 1989, <i>Winter Excavations at Clougha, the Roman Catholic Chaplain's and the Watchman's Quarters</i>. Report to National Parks and Wildlife Service. On file in PAHSMA Resource Centre, MAG/6/R</p> <p>Morrison, Richard, 1982, Project No: 82/38 Penitentiary Field Note Book, 3 vols. On file in PAHSMA Resource Centre, M2/66/277 (2) 82/38 (1-13).</p> <p>Ross, Lynette, 1994, <i>Excavations Undertaken for the Installation of Cables and Substation at Penitentiary and Sports Ground</i>. Report to National Parks and Wildlife Service. On file in PAHSMA Resource Centre, ELE/2/R.</p> <p>Piper, Andrew, n.d. Field notebooks, drawings and plans relating to Penitentiary excavations by Andrew Piper. On file in PAHSMA Administrative File 19/19.</p>
<b>• Workshops</b>				
	Five trenches excavated over two years by Jackman and Tuffin at the west end of penitentiary. Siting of trenches based on historic plans and geophysical survey.	<ul style="list-style-type: none"> <li>• Sequence of landfills and construction-related deposits associated with 1840s workshops and later 1850s modifications</li> <li>• Dolerite spall yard surfacing used between some workshop areas.</li> </ul>	16 small boxes	Tuffin, Richard, 2005, <i>Penitentiary Workshops Archaeological Report</i> (draft). Report to Port Arthur Historic Site Management Authority

Project ID. /Year	Description	Findings	Collections	Reference
<b>Ablutions/ Laundry</b>				
03/02 04/01	Five trenches excavated by Jackman and Tuffin over two years between Penitentiary and Champs St retaining wall.	<ul style="list-style-type: none"> <li>• Footings and flooring supports for ablutions and laundry structures and features</li> <li>• Drainage features relating to ablutions water and waste removal</li> <li>• Recording and interpretation of cuts relating to ablutions structures in north face of Champ St retaining wall</li> <li>• Ablutions yard surfacing was of macadamized dolerite</li> <li>• No in-situ subsurface evidence located relating to urinals and water closets</li> <li>• Artefacts relating to convict life including smoking pipes and illicit manufacture of lead gaming tokens</li> </ul>	16 small boxes	<p>Tuffin, Richard, 2004, <i>Penitentiary Ablutions Block Archaeological Report</i>. PAHSMA Document No: C14389, 12-ASP. Report to Port Arthur Historic Site Management Authority.</p> <p>Brooks, Alasdair, 2005, <i>Penitentiary Ablutions Block Artefact Report</i>. Report prepared for the Port Arthur Historic Site Management Authority.</p>

Project ID. /Year	Description	Findings	Collections	Reference
<b>Parade Ground</b>				
04/02	Two trenches excavated by Steele (2004) along alignment of northern Parade Ground wall.	<ul style="list-style-type: none"> <li>• Sandstone footings for parade ground wall at 300mm below surface</li> <li>• Sandstone footings for c. 1863 drinking fountain identified</li> <li>• Parade Ground yard surfacing of chipped dolerite</li> <li>• Parade Ground wall robbed out in sections</li> </ul>	1 archive box	Steele, Jody, 2004, <i>Port Arthur Parade Ground: Draft Archaeological Excavation Report</i> . Report for Port Arthur Historic Site Management Authority.

**Table 2: Geophysical Investigations for Penitentiary Surrounds**

Year	Area	Equipment Type	Details	Reference
2000-2001	Workshops	<ul style="list-style-type: none"> <li>•DC resistivity (Wenner <math>\alpha</math> array)</li> <li>•magnetometry (Overhauser)</li> <li>•frequency domain electro-magnetometry (EM-31 and EM-38)</li> <li>• induced polarization tomography</li> </ul>	<ul style="list-style-type: none"> <li>•75m x 50m grid, 2m line spacing</li> <li>•Identified near surface historic features including wall footings, and floor surfaces such as stone flagging.</li> <li>•Affected by modern services, post-penal fill, dolerite lining of Radcliffe Creek, and tidal intrusion.</li> </ul>	Dorn, Noelene, D. Gibbons, L. D'Andrea, Justin Legg, 2002, <i>Port Arthur 2002 Summer Geophysics Programme as part of the Annual Summer Archaeology Programme</i> . Report for Port Arthur Historic Site Management Authority. Hobart, University of Tasmania.
2000-2001	Ablutions	<ul style="list-style-type: none"> <li>•DC resistivity (Wenner <math>\alpha</math> array)</li> <li>•magnetometry (Overhauser)</li> <li>•frequency domain electro-magnetometry (EM-31 and EM-38)</li> </ul>	<ul style="list-style-type: none"> <li>•65m x 12m grid, 1m line spacing</li> <li>•Identified areas of known historic features including compacted chipped stone floor surfaces and footings, as well as subsurface drain</li> <li>•Affected by post-penal fill, as well as shallow dolerite bedrock, penitentiary window bars and structural supports.</li> </ul>	Dorn, Noelene, D. Gibbons, L. D'Andrea, Justin Legg, 2002, <i>Port Arthur 2002 Summer Geophysics Programme as part of the Annual Summer Archaeology Programme</i> . Report for Port Arthur Historic Site Management Authority. Hobart, University of Tasmania.
2004	Parade Ground	<ul style="list-style-type: none"> <li>•DC resistivity (Wenner <math>\alpha</math> array)</li> <li>•magnetometry (Overhauser)</li> <li>•frequency domain electro-magnetometry (EM-31 and EM-38)</li> <li>•ground penetrating radar (500 MHz with select areas using 800MHz antennae)</li> </ul>	<ul style="list-style-type: none"> <li>•25m x 86m grid, 1m line spacing</li> <li>•Identified areas of known historic features including parade ground wall, surfacing and tramway.</li> <li>•Affected by post-penal filling with resistive materials and low geophysical contrast between historic features and surrounding fill.</li> </ul>	Links, Fiona, 2008, <i>Geophysical Mapping Subsurface Archaeological Features at the Port Arthur Historic Site, Tasmania, Australia</i> . Doctoral dissertation in Geophysics, University of Tasmania, Hobart, Tasmania.
2011	Penitentiary building interior	<ul style="list-style-type: none"> <li>•Ground penetrating radar (500 MHz antenna)</li> </ul>	<ul style="list-style-type: none"> <li>•6m x 2.75m grid, 0.25m line spacing</li> <li>•Trial of fine-grained 0.25m grid survey to assess the potential for GPR identification of granary and mill features.</li> </ul>	Gibbs, Martin and Roe, David, in prep., <i>GPR Trials in the Port Arthur Penitentiary Building</i>

## **APPENDIX 4 - Chronology of Precinct Development Plans**