Australian Heritage Database

Places for Decision

Class : Historic

Identification

List:	**National Heritage List**
Name of Place:	Coal Mines Historic Site
Other Names:	
Place ID:	105931
File No:	6/01/106/0006
Nomination Date:	11/07/2006
Principal Group:	Mining and Mineral Processing

Status

Legal Status:	27/07/2006 - Nominated place
Admin Status:	09/08/2006 - Under assessment by AHC--Australian place

Assessment

Recommendation:	Place meets one or more NHL criteria
Assessor's Comments:	
Other Assessments:	:

Location

Nearest Town:	Saltwater River
Distance from town (km):	3
Direction from town:	N
Area (ha):	350
Address:	Coal Mine Rd, Saltwater River, TAS 7186
LGA:	Tasman Municipality TAS

Location/Boundaries:

About 350ha, 3km north of Saltwater River, comprising the following areas:

1. Coal Mines Historic Site.
2. An area bounded by a line commencing at the intersection of the northern boundary of the Coal Mines Historic Site with MGA easting 558200mE (approximate MGA point 558200mE 5241560mN), then via straight lines joining the following MGA points consecutively; 558160mE 5241830mN, 558100mE 5242480mN, 557920mE 5242660mN, 557710mE 5242560mN, 557510mE 5242070mN, then southerly to the intersection of the southern

boundary of Lime Bay Nature Reserve with MGA easting 557470mE (approximate MGA point 557470mE 5241700mN), then easterly via that boundary and its alignment to the point of commencement.

3. A 340 metre seaward offset extending between the easterly prolongations of the northern and southern boundaries of the Coal Mines Historic Site. The offset extends from the High Water Mark.

Assessor's Summary of Significance:
The Coal Mines Historic Site contains the workings of a penal colliery and convict establishment that operated from 1833-1848. It is associated with British convict transportation to Australia and is one of a suite of probation stations established on Tasman Peninsula to exploit the natural resources and provide a secure and isolated landscape. At its peak the Coal Mines accommodated up to five hundred convicts as well as over 100 people that included guards and their families. It is a relict industrial landscape that demonstrates the structure and operation of a penal probation station and a colliery that provided the hard labour for the most refractory convicts as well as third class probation convicts.

The Coal Mines probation station was considered to be a most severe place of punishment. The many records of floggings and solitary confinements, convey the severity of convict life at the coal mines and are grim evidence of the realities of convict punishment. There are significant ruins such as the remnants of convict barracks with punishment cells and the later solitary alternating cell complex. The importance of the church for reform and moral development of convicts is evidenced in the ruins of the chapel located between the two convict barracks and the presence of a catechists house.

The Coal Mines was considered by the colonial administration and the Tasmanian community as the place where homosexuality was most rife and with its dual reputation for harshness and immoral activity, the Coal Mines contributed to the failure of the probation system and its demise.

Although not the first or largest colonial mining venture it was an important resource for the Van Dieman's Land economy in the early 1800s and unlike other colonial mines the site is intact and represents the role of convicts in the economic development of the colony. Major remaining features of the mining operation include coal seams at the beach, the remains of the original adits, the main pit head with original machinery footings, the boiler and the airshaft, and circular ground depressions which indicate the sites of the mine shafts. The place also contains features relating to the transportation of coal including the inclined plane for coal tram cars, which extends from the 1845 shaft on Coal Mine Hill to Plunkett Point, subsidiary inclined planes which appear as modifications to the natural landscape , the remains of wharves and jetties and mounds of ballast and coal in the waters of Little Norfolk Bay.

The relict cultural landscape coherently demonstrates the prisoner management, administration and the workings of an industrial convict operation. It has a completeness in the array of relict features, landscape modification and known intact sites. There is high integrity in the ability of the place to demonstrate, the spatial layout of an operating convict probation stations and early nineteenth century colliery

complete with support industries. The place shows the hierarchy of officers accommodation with the elevated location of the commanding officers house, the relationship of officers quarters with overseers quarters, and prisoner accommodation. It also shows the link between the bakehouse, prisoner barracks and the chapel located in the barracks complex. The layout and dimensions of individual buildings convey the living conditions of the colonial prison settlement. Different types of prisoner accommodation can be determined from the ruins: the barracks with dormitory accommodation and solitary cells, the group of 18 solitary alternating cells remaining from 36 built in 1845-6 to isolate convicts from contact with fellow prisoners, and the site of 108 separate convict apartments constructed in 1847.

Although the landscape setting has revegetated since the period of mining, the place well demonstrates the integration of prison and mine features in the landscape along with the use of the landscape resources. Attempts at self sufficiency are evident in the use of the local topography for creating inclined planes for tramways transporting coal to the jetties, vegetable gardens, the use of sandstone from the site quarry for the major buildings and the lime kiln near the beach for the manufacture of lime mortar from shells.

The now revegetated bushland is evident of the timber resources used in the mine shoring. The two hills Coal Mine Hill and Mount Stewart, provided locations for semaphore communication and surveillance and contain the sites of the semaphore structures and a guard house.

The Coal Mines Historic Site, has yielded and has high potential to further yield valuable information on the working conditions, technical skills, penal administration and the mining technologies used by convicts. Archaeological exploration of convict accommodation and associated structures, and in particular, the dormitories and solitary cells have the potential to provide a greater understanding of penal architecture and the lives and conditions of convicts.

Draft Values:

Criterion	***Values***	***Rating***
A Events, Processes	The Coal Mines Historic Site contains the workings of a penal colliery that operated from 1833-1848. It is associated with British convict transportation to Australia and at its peak accommodated up to five hundred convicts and over a hundred others including guards and their families. It is a relict industrial landscape demonstrating the structure and operation of a penal probation station and a colliery where the most refractory convicts were put to hard labour. Probation stations operated on the principle that punishment and reform could be achieved by hard labour, religious instructions and education, with convicts strictly classified according to the severity of their offences. The place is an outstanding representation of the economic value of convict labour as evidenced in the remains of the colliery, wharves and jetties, and the ruins of commissariat	AT

store.

It is an outstanding representation of evolving convict management, clearly demonstrating the key features and design of a probation station for refractory convicts.

The operation of the probation station is demonstrated by the remains of the commandant's house located on the rise midway between the main convict barracks and the coal mines, the roadways between the mine, dormitories, wharves and jetties, and the semaphore sites at Coal Mines Hill and Mt Stewart. Ruins of officers quarters, guard houses, and the bakehouse are evident near the convict barracks.

The Coal Mines Historic Site contains the ruins of convict barracks with solitary punishment cells, 18 cells of the 1845-6 alternating separate cell complex used for solitary confinement punishment, and the site of 108 separate convict apartments built in 1847, all of which demonstrate the classification system. The latter accommodation was used for isolating the prisoners at night. The importance of the church for the reform and moral development of convicts is evidenced in the ruins of the chapel located between the two convict barracks. Ruins of the catechists house are located some distance from the main barracks complex.

The Coal Mines was considered a most severe place of convict punishment. The high number of solitary cells, floggings and solitary confinements indicate a comparatively high record of additional punishment. The colonial administration and Tasmanian community also considered the place as among the worst for homosexuality - homosexuality figured prominently in the anti-transportation debate and was noted in the report prepared for the United Kingdom Prime Minister William Gladstone by Charles La Trobe in 1847. With the place's dual reputation for harshness and immoral activity, it contributed to the failure of the probation system and its demise.

B Rarity	The Coal Mines is one of the few Australian convict sites which outstandingly represent the economic role of convicts. It is rare as the only surviving penal coal mines with coherent surface remains. The place contains features related to the extraction of coal including coal seams at the beach, the remains of the original adits, the main pit head with original machinery footings, the boiler and the airshaft, and ground circular depressions which indicate the sites of the 1838, 1842 and 1845 main shafts. The place also contains features relating to the transportation of coal including evidence of the	AT

	inclined plane for coal tram cars, which extends from the 1845 shaft on Coal Mine Hill to Plunkett Point, subsidiary inclined planes which appear as modifications to the natural landscape and the remains of wharves and jetties. The solitary cell complex built in 1845-6 is the only extant example of this form of convict punishment accommodation and an outstanding example of the extreme harshness of convict life. The cells effectively isolate convicts from contact with fellow prisoners and were a way of both punishing convicts and ensuring that homosexual activity did not occur.	
C Research	Being the only extant penal colliery in Australia, the surviving ruins and the archaeological remains associated with the structures of Coal Mines Historic Site, have yielded and have high potential to further yield valuable information on the working conditions, technical skills, penal administration, and the mining technologies used by convicts. Archaeological exploration of convict accommodation and associated structures, and in particular, the dormitories and solitary cells as well as the site of the separate apartments have the potential to provide a greater understanding of the lives and conditions for convicts in a place that was renowned for its harshness and 'immorality'. The existence of extensive historical documents in public collections and its ability to provide additional contextual information to evidence uncovered at the site enhances the importance of the research potential of the place.	AT
D Principal characteristics of a class of places	The Coal Mines Historic Site is an outstanding relict cultural landscape that coherently demonstrates the prisoner management, administration and the workings of an industrial convict operation. It is important for the completeness of the array of relict features, landscape modification and known intact sites. It has high integrity in its ability to demonstrate, the spatial layout of convict probation stations and an early nineteenth century colliery complete with support industries. The place also demonstrates the hierarchy of officers accommodation with the elevated location of the commanding officers house, the relationship of officers quarters, with overseers quarters and prisoner accommodation. It shows the relationship of the bakehouse, prisoner barracks and the chapel located in the barracks complex. The standing ruins illustrate the style of brick work and masonry construction as well as the layout and dimensions of individual buildings and hence the living conditions of the colonial prison.	AT

The ruins demonstrate three types of prisoner accommodation: the 1838 stone prisoners barracks building for dormitory accommodation with solitary cells in the basement; 18 solitary cells which remain of the group of 36 cells constructed in 1845-46; and the site of the 108 separate apartments constructed in 1847.

Although the landscape setting has revegetated since the period of mining, the place well demonstrates the integration of prison and mine features within the landscape along with the use of the landscape resources. Attempts at self sufficiency are evident in the use of the local topography for creating inclined planes for tramways transporting coal to the wharf and jetty, the use of sandstone from the site's stone quarry for the major buildings, the lime kiln near the beach for the manufacture of lime mortar from shells. Tanning pits remain in the landscape while mounds of ballast and coal from the mining operation are in the waters of Little Norfolk Bay.

The now revegetated bush land is evidence of the timber resources used in the mine shoring. The two hills Coal Mine Hill and Mount Stewart, provided locations for semaphore communication and surveillance and contain the sites of the semaphores and the guard house.

Historic Themes:
Group: 02 Peopling Australia
Themes: 02.03 Coming to Australia as a punishment
Sub-Themes:

Group: 03 Developing local, regional and national economies
Themes: 03.04 Utilising natural resources
Sub-Themes: 03.04.03 Mining
Group: 03 Developing local, regional and national economies
Themes: 03.04 Utilising natural resources
Sub-Themes:
Group: 07 Governing
Themes: 07.06 Administering Australia
Sub-Themes: 07.06.05 Incarcerating people

Nominator's Summary of Significance:
The Coal Mines Historic Site is an outstanding example of the 19th century European global strategy of using the forced labour of convicts. Convicts transported to Australia are acknowledged as the principal labour force in securing a reasonably successful British outpost. Many convicts went on to make a major contribution to the Nation that is Australia as part of the subsequent free or pardoned population despite

the inhospitable physical and social environment they had already experienced. The hard physical labour and the inhuman separate cells of the Coal Mines strongly represent the hardships that many convicts experienced during their servitude.

The Coal Mines are the only penal coal mine in Australia with confirmed substantial physical evidence of Early 19th century coal mining technology including its extraction, handling and transportation. The Mines were the first commercial mines in Tasmania and one of the first in Australia, and they played an important role in the economic confidence of the new colony. The Mines have the ability to demonstrate how the early 19th century coal industry operated in Britain and Australia and contain the beds and footings of the winding and pumping machinery installed in 1845 which represent the earliest pit top workings in Australia. The Coal Mines Historic Site is an important step in the progress of Australia's significant ore mining industry.

The Coal Mines was intended as the most severe place of secondary punishment in the Colony of Van Diemens Land, but it was also hoped that sufficient coal would be produced for all government needs in an emerging steam age. The extent of the former industrial operations is demonstrated by the extant ruins and archaeological remains which substantiate the extensive archival records. Coal was a premium commodity in the early Australian colonies and the industrial archaeological evidence of site layout and extraction, handling and transportation methods adds greatly to the significance of the place. The site illustrates the importance of work in the penal system and the role of the convict used as human capital in building colonial economies.

In conjunction with other convict places in Tasmania and on Norfolk Island, the Coal Mines Historic Site illustrates the adaptation of the British penal system to Australian conditions and the evolution of the secondary punishment system into the Probationary System. The hard dark work that the Coal Mines and the inhuman separate and solitary cells, strongly conveys the lowest rung of controlled labour on the probationary ladder and the ultimately flawed principle that extreme punishment (physical and mental) is a deterrent to repeat offenders.

The alternating underground vaulted brick separate cells of 1845-46 are one of the few examples of this type of prison accommodation which was first introduced into Australia during 1844-46. The cells demonstrate innovation in the method of isolating convicts at night from even the most minimal contact with their fellow prisoners. Together with the extant stone punishment cells from c.1838 convict barrack the Coal Mines Historic Site possesses the most intact and evocative examples of isolation cellblocks in Australia. The historical record and the presence outstanding extant examples of isolation cells at the Coal Mines Historic Site are important in comprehending 19th century intolerance with same sex relationships in Britain and Australia.

The Coal Mines Historic Site is one of the last refuges of two threatened or endangered species, the rare forty spotted pardalote and the vulnerable hairstreak butterfly. Both are found in the Sites Eucalyptus viminalis forest with Acacia dealbata and E. viminalis providing vital habitat for part of the butterflys life cycle. The site has great potential for scientific research and education concerning the habitat ecology of these species.

In combination with the oral tradition, documentary evidence, structures, engineering relics, archaeological features and landscape, the Coal Mines Historic Site have outstanding potential for community education in colonisation, convict and mining history. Archival records and collections, largely in the ownership of Tasmanian State Government, provide a substantial research resource which, in conjunction with documentary evidence illuminate the lives of the convicts and of their gaolers and administrators who resided at the Mines.

The Coal Mines since becoming ruins in the late 19th century, present an outstanding combination of natural beauty and historical complexity. It is a place that holds many secrets and begs to be explored; and it is this sense of mystery and discovery that makes the site special to visitors. The topography and built elements (together with minimal views to contemporary settlements, limited visitor infrastructure and the subtle applied interpretation) combine to provide a chronicle of an abandoned gruesome past as a British convict outpost in a remote Tasmanian setting.

The focus of this nomination is on the convict history of the Coal Mines Historic Site. Aboriginal values are yet to be identified, documented and assessed.

The Coal Mines Historic Site is an outstanding example of the 19th century European global strategy of using the forced labour of convicts. In Australia this strategy had a marked impact on early Colonial history and on the overall Australian psyche. Convicts transported to Australia are acknowledged as the principal labour force in securing a reasonably successful British outpost. Many convicts went on to make a major contribution to the Nation that is Australia as part of the subsequent free or pardoned population despite the inhospitable physical and social environment they had already experienced. The hard physical labour and the inhuman separate cells of the Coal Mines strongly represent the hardships that many convicts experienced during their servitude.

In conjunction with other convict places in Tasmania and on Norfolk Island, the Coal Mines Historic Site illustrates the adaptation of the British penal system to Australian conditions and the evolution of the secondary punishment system into the Probationary System. The System (1841-53) was based on the idea that convicts could make amends and be redeemed for their crimes through systems of controlled labour and extended periods of isolation, preventing intimacy both mental and physical. Convicts worked on public works through a series of stages of labour, each stage of which was less controlled until the convict was deemed suitable for release. The hard dark work that the Coal Mines represented then and now, and the inhuman separate and solitary cells in which the most recalcitrant prisoners were housed, strongly conveys the lowest rung of controlled labour on the probationary ladder and the ultimately flawed principle that extreme punishment (physical and mental) is a deterrent to repeat offenders. The Coal Mines Historic Site is the most industrialised of all Australia's Probation System sites.

The historical record and the presence of outstanding extant examples of isolation cells at the Coal Mines Historic Site are important in comprehending 19th century intolerance with same sex relationships in Britain and Australia.

The Coal Mines Historic Site is an important step in the progress of Australia's significant ore mining industry. It has the ability to demonstrate how the early 19th century coal industry operated in Britain and Australia. The reclaimed serenity of the Coal Mines Historic Site in its outstanding marine and bushland setting demonstrates the ultimately low impact that early 19th century mineral exploitation using the minimal amount of mechanisation had on the natural environment.

The Coal Mines are the only penal coal mine in Australia with confirmed substantial physical evidence, they were the first commercial mines in Tasmania and one of the first in Australia, and they played an important role in the economic confidence of the new colony. The mines contain the beds and footings of the winding and pumping machinery installed in 1845 which represent the earliest pit top workings in Australia.

The Coal Mines Historic Site is one of a few Australian sites which outstandingly represent the value of convict labour in establishing engineering infrastructure in European colonies. The other complex site which illustrates this theme in a tangible way is the Great North Road in NSW.

The dual role of secondary punishment station and an ambitious engineering venture at the Coal Mines is rare in Australian convict history, with the Coal River site at Newcastle, and the Great North Road (both in NSW) being the other well known examples. The Coal Mines has more above ground evidence of mining activity than at Newcastle and it is likely that the archaeological resource of the Tasman Peninsula convict mine is also more intact, including evidence of how the coal was extracted, handled, processed and shipped.

The alternating underground vaulted brick separate cells of 1845-46 are one of the few examples of this type of prison accommodation which was first introduced into Australia during 1844-46. The cells demonstrate innovation in the method of isolating convicts at night from even the most minimal contact with their fellow prisoners. Together with the extant stone punishment cells from c. 1838 convict barrack, the Coal Mines Historic Site possesses the most intact and evocative examples of isolation cellblocks in Australia.

The Coal Mines Historic Site is one of the last refuges of two threatened or endangered species - the rare forty spotted pardalote and the vulnerable hairstreak butterfly. Both are found in the Site's Eucalyptus viminalis forest with Acacia dealbata and E. viminalis providing vital habitat for part of the butterfly's life cycle

The subsurface and maritime archaeological deposits of the penal colliery have been confirmed as a finite resource of national, possibly international, research significance. The Coal Mines contains largely unexplored archaeological evidence which because of its integrity and authenticity provides a unique insight into penal mining operations, associated industries and settlement from the material culture perspective unavailable from documentary sources alone.

In combination with the oral tradition, documentary evidence, structures, engineering relics, archaeological features and landscape, the Coal Mines Historic Site have outstanding potential for community education in colonisation, convict and mining history. Archival records and collections, largely in the ownership of Tasmanian State

Government, provide a substantial research resource which, in conjunction with documentary evidence, have the potential to reveal and present much of the story of the Coal Mines Historic Site.

The site has great potential for scientific research and education concerning the habitat ecology of the rare species found there - the forty spotted pardalote and the hairstreak butterfly.

Australia's convict sites share patterns of environmental and social colonial history including classification and segregation; dominance by authority and religion; the provision of accommodation for the convict, military and civil population; amenities for governance, punishment and healing; and the elements of place-building, agriculture and industry. The ruins and archaeology of the Coal Mines Historic Site, together with the archival record are outstanding in demonstrating the principal characteristics of an Australian convict site. The form and location of elements at Coal Mines Historic Site display deliberate design and arrangement, reflecting the order and hierarchy of early colonial Australia's military and penal history.

The Coal Mines Historic Site is important for its demonstration of the techniques used in early to mid 19th century colonial British underground mining sites.

The Coal Mines were established in 1833 to mine coal and to provide secondary punishment for re-offending convicts. The mines are significant for their association with convict transportation and the use of convict labour to establish infrastructure in the new colonies and extend colonial power. The coal mines were an outstation of the Port Arthur penal settlement and were intended to be the most severe form of punishment for re-offending convicts, short of capital punishment. As such the Coal Mines Historic Site is an outstanding example of the severity of the convict transportation system and its use to promote law and order.

The stone Prisoners' Barracks (c. 1838) represent a brief period of imperial confidence - in the penal system, in the mines as part of that system, and in the commercial possibilities of the coal. The buildings were designed to a known formula with decorative flourishes and were built to last. In this period prisoners messed together in dormitories. While the authorities promoted the Coal Mines as a place for the worst offenders, religious instructors tried to convince the convicts of salvation in the adjacent Chapel.

In the 1840s, a network of probation stations was established throughout the Tasmania - all convicts in Tasmania worked in probation gangs for a period of time. The site is important as part of the collection of Probation station remains located on the Tasman Peninsula which were administered in part from the Port Arthur convict establishment. Port Arthur, the Coal Mines and the other Peninsula Probation Stations present an outstanding interrelated standing and subsurface archaeological collection of convict period infrastructure including extant prison complexes, hospitals, asylums, houses, military buildings, industries, wharves, farms, tramways, quarries, garden plots, constable stations, semaphore stations, and cemeteries.

The Coal Mines site presents an outstanding combination of natural beauty and historical complexity. It is a place that holds many secrets and begs to be explored;

and it is this sense of mystery and discovery that makes the site special to visitors Within its layered cultural landscape, the topography and built elements combine to provide a physical chronicle of a British convict outpost in a remote Tasmanian setting which (due to the lack of visual impact from surrounding contemporary Australian settlement) can still be perceived as unadulterated.

The Coal Mines Historic Site is one of a set of places of secondary convict punishment - together with Newcastle NSW, Port Macquarie, Norfolk Island, Macquarie Harbour, Masons Cove (Port Arthur) and Maria Island - which relied on an `alien', water-bounded landscape to form the bars of the prison. The marine location and views to and from the water; combined with the romantic and at times comprising fine architectural detail are integral elements of both the visual, historical and evocative qualities of the place.

The identification of a coal seam by surveyors precipitated the disfigurement of the site from a place of natural beauty into a convict punishment station and working mine. With the exhaustion of the resource nature has reasserted itself over the site including providing a home for rare and threatened species Since the early 20th century the Coal Mines Historic Site has had romantic qualities as picturesque `ruins' set in a marine landscape and surrounded by native bush. The minimal contemporary infrastructure and the subtle applied interpretation allow visitors a sense of discovery of a scenic place with an abandoned gruesome past.

The convict period remains of the Coal Mines demonstrate the dramatically changing technical aspects in the extraction and transportation of the coal ore in the early 19th century, from relatively simple manual techniques to the more industrialised systems of the steam age.

The planning and remaining built and archaeological fabric of the Coal Mines Historic Site demonstrates convict settlement design practices - essentially military in character with the organisation of the buildings in relation allowing vistas for surveillance and the separation of classes and functional operations. The presence of some fine architectural detailing in the ruins of the Coal Mines Historic Site adds to the importance of the place in demonstrating the Imperialistic approach of 19th century Britain to even its most far flung and prosaic settlements.

The construction of isolation cells in the depth of the mine demonstrates most forcefully the coexistence of industrial endeavour and inhuman punishment. These underground cells were built to the express design of Lt. Governor Arthur, to be the most feared form of punishment in Van Diemen's Land.

The Coal Mines Historic Site has outstanding heritage value to the nation because of the place's special association with British convicts in Australia and their administrators in the period 1833 to 1848. The Coal Mines, in conjunction with other key Australian convict sites, exemplifies a world-wide process of colonial settlement. The British bureaucrats, who created the colonial penal system evident in post 1788 Australia and demonstrated to a high degree at CMHS, were significant in perpetrating the eighteenth and nineteenth-century global colonisation by Europeans.

The Coal Mines is illuminated by the biographical narratives of the lives of the

convicts who resided at the Mines. The convict record of Joseph Greaves, who drowned when he fell into the sump of the Mine in 1840 is a typical example.

Governor Arthur: the Governor of Van Diemens Land at the time that the Coal Mines were established as a penal settlement, was involved first hand in the rules and regulations which gave order to the convict station. Other Governors and colonial administrators of the Convict system also had occasion to visit, report and/or make recommendations on the situation at the Coal Mines. Lady Jane Franklin visited the Coal Mines in 1837 and wrote a review of operations at the penal settlement.

Description:
The reserve in which the Coal Mines Historic Site is located incorporates 214 hectares of gently rolling hills covered in open forest and woodland. The eastern edge of the site is coastline of a series of bays and low headlands. The main settlement is in a concentrated area between Coal Mine Hill and an inlet of Norfolk Bay.

The vegetation of the site consists of areas shrubby forests of *Eucalyptus viminalis, E. amygdalina,* and *E. obliqua,* heathy forest/woodland and sedgey woodland. These forests and woodlands are mostly regrowth. The area is also the habitat for many native and endemic species of birds and mammals. The Coal Mines Historic Site is one of the last refuges of two threatened or endangered species – the forty spotted pardalote and the hairstreak butterfly. Both are found in the *Eucalyptus viminalis* forest with *Acacia dealbata* and *E. viminalis* providing vital habitat for part of the butterfly's life cycle (Parks and Wildlife 1997:20).

The Owen Stanley's paintings of the site during convict times (in Brand 1990, 2003:p.66) much show a predominantly cleared landscape and it is recorded that local timber was used for the constructions, mine shoring and charcoal for fuelling the steam engines. A garden area was still discernable on slopes on Coal Mine hill in 1986, while a remnant row of *Eucalyptus viminalis* lined the former drive to the Commandant's House and exotic garden escapes were present around the structure (Egloff 1987:plate 18).

On the foreshore below the main settlement are the remains of the main coal wharf including a grid of logs and a conspicuous heap of ballast in deeper water. Stone remains of a number of smaller wharves exist between this site and Plunkett Point.

The remaining evidence of the coal mining operations include features associated with the extraction and transportation of the coal, the mining settlement, support industries and the communication and security systems. These are scattered throughout the shrubby forest. There is little evidence of the original adits other than disturbed landform. The sites of the 1838, 1842 and 1845 main shafts and numerous minor shafts are readily apparent as ground circular depressions. The associated spoil dumps and coal stockpiles are also present. A boiler thought to be from the 1845 workings, has been relocated to the main pit head, where original machinery footings survive. One of the most impressive shafts in the area is the 'air shaft' also known as the 'convict well' although its original purpose has not been confirmed. The shaft is lined with cut stone to the level of the natural rock.

Many of the mines' original roads and tramways have survived including the

formation of the inclined plane which extends from the 1845 shaft on Coal Mine Hill to Plunkett Point. All that remains of the numerous wharves and jetties is a grid of logs on the site of the original coal wharf, a conspicuous heap of ballast and the stone remains of a number of small jetties between this site and Plunkett Point.

The most striking historic remnants in the reserve are the buildings of the main settlement including the prisoners' barracks with solitary cells, chapel, officers' quarters, the group of 18 solitary alternating cells and the site of the 108 separate apartments. Other remnants include the commandant's house, a brick cottage and the military barracks together with several headstones on the slopes above the main settlement and several stone cottages located near Plunkett Point. Foundations and subsurface remains are all that remain of most other buildings, including the commissariat store. No early timber constructions have survived.

Several activities were undertaken to support the mines and settlement, including quarrying and stonemasonry, brick making, lime burning, tanning, blacksmithing, timber felling, charcoal burning, farming and gardening. Two quarries were used to provide building stones. Of these the northern one is particularly impressive with pick marks still visible in the quarry walls and a number of dressed blocks lying nearby. Other remains include the lime kiln, which is largely intact, and a series of tan pits to the west of the 1838 shafts. There is no evidence of blacksmithing, timber getting or charcoal burning.

The signal stations on Coal Mine Hill is marked by a small section of foundation and a pile of rubble. The remains of the semaphore and guard house on Mt Stewart are in a similar condition.

The historic mine features consisting of adits, roadways, tramways, mine shaft depressions, the inclined planes, engine mountings, ramped earthworks, slumped shaft, sites of jetties are all described in detailed and plotted on maps in the report by Bairstow and Davies (1987) and in Knaggs (2006,pp.3-12)

The air shaft also know as the convict well or sump shaft was convict-built, but its function is unknown, as there appears to be no record of its construction. It is commonly called the ‘convict well’ but is unlikely to have served this function given its distance from the settlement. It may have been a sump to lower the water levels in the underground workings, or, alternatively, an exploratory shaft.

In 1987 the massive timber remains of the coal wharf and jetty were in such good condition that it was deduced that it had been in use long after the convict settlement closed. A grid of logs extends 65 metres along the beach. A jetty ran into deep water from the centre of the wharf identified by heap of ballast which is above water at low tide. There are associated pile of sandstone blocks and a (drainage?) earthwork seven metres long. The position of a former small timber jetty shown on plans is marked mainly by submerged rocks, possibly ballast. A maritime archaeological study by Amell et al (2005) who surveyed the Plunket Point jetty and site reported that two concentrated mounds of ballast on the sea bed approximately 50 m form the shore, 6 large timbers, coals of varying sizes and numerous cultural artefacts were extant. A maritime archaeological study by Lennox (2001) confirmed the size of the wharf as being 70 m x 18m.

A quarry is located to the southwest of the Penitentiary and the main quarry is to the north of Plunkett Point. The northern quarry is 20 metres across and the vertical walls stand 15 metres high. Narrow drainage channels cut to the cliff edge are present. Pick marks are still visible in the walls. Site of stone dressing some 4.5 metres away visible by remaining (rejected?) stone blocks. Possible smaller quarry or drainage structure to the west.

The remains of conical lime kiln of the standard format found on the Peninsula stood to a height of 1.5 metres in 1987. Tanning pits are located west of the 1838 shafts. Bairstow and Davies identify them as from the convict period and suggest they were essential to supply leather for boots and mining apparatus. There are two associated water courses

The remains of the brick kilns and the adjoining clay pits have survived in a private property adjacent to the historic site. The brick kiln is partially demolished so that its original form is no longer visible. It may have been a scotch kiln, although the extant walls are massive. The brick rubble is in an adjacent pile. The outline of one of the clay pits has been enlarged to form a modern dam. There is are remains of a well defined road linking the brick kilns to the settlement.

Brick and stone remains of a bakehouse oven is extant.

All the extant features were recorded and plotted by Bairstow and Davies (1987).

The place contains a harmonious mixture of historic ruins and natural beauty that contribute to a high degree of aesthetic appeal. The particular aesthetic characteristics are the weathered sandstone blocks and red bricks, combined with seascapes of Norfolk Bay, interspersed in the native forest setting. The underground cells are highly evocative conveying the concepts of entrapment and isolation experienced by the convicts in the early 19th Century. They create strong emotional responses in people.

The large collection of documents and archival records from the convict administration are in public records and include reports, letters, maps, plans ,paintings and a magistrates bench book. A small stove from the site is in the Queen Victoria Museum collection.

Analysis:

Boundary consideration

The National Heritage List boundary has been extended beyond the Coal Mines Historic Site to include the major semaphore site are Mount Stewart, in the adjacent Lime Bay Nature Reserve, part of Little Norfolk Bay where piers and wharves associated with the operations were located.

Reports used to analyse the values are:

- The nomination by the Tasmanian Government
- The Convict Experience and the National Heritage List (Pearson 2006)

- Other sources referenced

Criterion (a) The place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history;

Nominator's claims against the criterion

1 The place is an outstanding example of the 19th C European global strategy of using the force labour of convicts. In Australia the strategy had a marked impact on early Colonial history and on the overall Australian psyche.

2 Convicts transported to Australia are acknowledged as the principal labour force in securing a reasonably successful British outpost. Many convicts went on to make a major contribution to the nation …

3 The former industrial operation is demonstrated by the extant ruins …

4 The site illustrates the importance of 'work' in the penal system and the role of the convict in building colonial economies

5 Illustrates the adaptation of the British penal system to Australian conditions and the evolution of the probation system

6 Conveys the lowest rung of the probationary ladder of controlled labour and the flawed principle that extreme punishment is a deterrent to repeat offenders.

7 The solitary cells are important in comprehending 19th C intolerance with same sex relationships.

8 Important in Australia's ore industry history and demonstrating how the coal industry operated in Britain and Australia and the existing landscape demonstrated the lack of impact that minimal mechanisation had on the natural environment.

Response to the Nominator's Claims

Claims 1 and 2 are at the broad level of global political processes and therefore lacking in the specific detail required for these criteria. In terms of criteria (a), the Coal Mines Historic Site will be assessed according to the economic value of convict labour, as representative of the evolving role of convict management and its contribution to the demise of transportation.

Claims 3,4,5, and 6 are covered in the assessment.

Claim 7 is at the broad level of social mores. The issue of homosexuality will be analysed in terms of the way responses to its prevalence influenced beliefs about convict transportation. Claim 8 is regarded as peripheral to the national stories associated with the Coal Mines Historic Site (CMHS).

Economic value of convict labour for public purposes

The Coal Mines Historic Site is an outstanding example of the economic value of convict labour. It played an important role in the early stages of the colony of Van Diemen's Land when it was required to start paying its own way as a means of transitioning from a penal colony to a free colony. Coal was an essential fuel and an important prerequisite for a functioning economy and since only small quantities were mined up to 1833, the discovery and subsequent exploitation of the Coal Mines was of considerable importance.

Before the discovery of coal at Plunkett Point, (the site of the Coal Mines), the colony of Van Diemen's Land was required to import coal from NSW (Brand 2003: p16).

The colony had suffered from lack of coal and high priority was given to locating deposits. This instigated the establishment of the colony at Macquarie Harbour. The colonial administration gave a high priority for locating a local deposit and at the time of the coal discovery in 1833, Hobart Town was said to have a considerable demand for coal (Brand 2003: p.16).

Also at the time of the discovery, the colony was operating on the principle of dividing costs between the colony and the mother country. The British Government was prepared to defray the costs of convict management but the colony was responsible for public infrastructure such as schools, religion and police. Lieutenant Governor Arthur had foreshadowed the possibility of what he called local government taking a larger share of the colony's expenses in 1825 (Shaw 1966: p259) but in 1833, he was arguing that the colony could not support the expenses of an expanded police force required by the large presence of convicts.

The discovery of a local supply of coal meant that the local population would be less reliant on NSW for all its supplies (and hence better off financially) and the sale of coal would assist in offsetting the costs of administering the penal colony. Coal was in high demand as many of the officials administering convicts were entitled to an allowance of coal as part of their conditions of pay since coal was the fuel used for domestic heating. Government offices were also heated using coal. Coal was also used to generate heat and steam to run industrial equipment. The Coal River settlement was a similar mining operation to the Plunkett Point operation in that coal was initially mined from adits however it appears more primitive in that the coal was wheeled in barrows. In 1822 Port Macquarie took over as the site of secondary punishment and in 1831 the Australian Agricultural Company took over the mining of coal. The company had a monopoly of coal mines on the mainland and charged high prices that was likely to have been an impetus to establishing coal mines elsewhere (Knaggs 2006: Att.E). The availability of coal also assisted in the growing mechanisation of the colony. As it transpired, the quality of the coal was poor (Lempriere 1839 as quoted in the Coal Mines Historic Site, Parks and Wildlife Service), the mine was beset by mismanagement and claims of 'immorality' and during its operation its total output was about 60 000 tonnes.

The economic value of the Coal Mines is not as considerable as Port Arthur which by 1840 housed over 2000 convicts, soldiers and civil staff. Port Arthur became a major industrial settlement producing ships and shoes, clothing and bells, furniture and worked stone, brooms and bricks. It also was the management centre for probation stations throughout the Tasman Peninsula and co-ordinated the timber getting and agricultural activities of these. The Coal Mines was also administered by Port Arthur.

Darlington Probation Station was also significant in its economic activity. During its first convict period (1825-30), its industries included cloth, blanket and shoe-making, tanning, timber cutting and pottery (Darlington NHL Assessment 2006) but it housed less than 150 convicts at any one time. In its second convict period (1842-1850), its main activity was agriculture and associated industries with over 400 acres of crops needing attention (Darlington Asessment).

The Coal Mines was not the first colliery in the colonies. A convict coal mine

operated at the Coal River Newcastle and from 1805 to 1820 produced 21 728 tons of coal (Turner 1982: p17). The operation was scaled down as convicts were moved to Port Macquarie for secondary punishment and Government interest in the mine closed in 1831 (Eklund 2005:p.3-4). A small convict mine also operated at Macquarie Harbour in the 1820s but was unsuccessful and short lived (Bacon 1986:p.3). The Coal Mines was the first successful coal mining operation in Tasmania and produced over 60 000 tons of coal during the is 15 years as a government run operation.

While Port Arthur and Darlington are considered important for their overall economic contribution, the Coal Mines was important for enabling the colony in its formative stages to become more self-sustaining and therefore providing the conditions that allowed the later economic expansion exemplified by Port Arthur and Darlington.

Evolving convict management

The Coal Mines Historic Site is of outstanding value because of its representation of the evolving convict management system. The Coal Mines began its life as a secondary punishment station (a place where reoffending convicts were sent) with Lt Governor Arthur remarking " I think it is not possible that better employ will be found for some of the most refractory convicts than employing them in working coal mines" (The Coal Mines Historic Site, Parks and Wildlife Service). However James Backhouse in 1833 found 'most of those employed were the better class of prisoner' (Knaggs 2006: Att.D). With the abandonment of the assignment system, it was made into a probation station in 1840 and after 1846 when the probation system was considered a failure, it again became a secondary punishment station.

Bairstow and Davies (1987:p.21) noted:
'Until 1841, coal mining was still considered a form of punishment (Brand ms:81-82). In 1841 the Probation system was introduced. Prisoners under probation, if they had mining experience they were sent to the mines (Brand ms: 75). The result was an increase in the skilled work force (Brand ms 80 and 83) but coal production did not increase proportionately.'

The probation system of convict management was unique to Van Diemen's Land and was based on the principle that punishment and reform could be achieved by hard labour, religious instruction and education. It required a strict classification of prisoners, a separate prison for an initial period of confinement and a comprehensive program of religious and moral instruction (Brand 1990:p1). It retained the concept of labour as punishment that was part of the assignment system but the labour would be expended on public causes and the furthering of the development of the colony. At its peak, the Coal Mines accommodated up to five hundred convicts and over 100 others that included guards and their families.

In the records of 1846, there were 186 first class prisoners, 82 second class and 104 third class with 195 prisoners recorded for doing hard labour, presumably mining while others were recorded as doing works on infrastructure development and general management tasks.

The punishment rate at the Coal Mines was high. For the year 1847, 14000 punishments were meted out to the 400 employees. These included 728 solitary confinement with bread and water, given out by the superintendent, while the

Magistrate imposed 672 punishments of flogging, sentencing to chains or periods of solitary confinement (Hartwell 1954 in Bacon 1986:p.4).

The Coal Mines Historic Site is one of approximately 78 probation stations in Tasmania. The Tasmanian Archaeological Society have conducted a survey of the extant condition of 14 probation stations (four of which are also on the Tasmanian Heritage Register). At least 24 probation stations remain in varying condition in Tasmania. Of the 14 probation stations on the Tasmanian Heritage Register, six (Jericho, Old Wharf, Long Marsh, Rocky Hills, Saltwater River and Seven Mile Creek) consist of ruins or sub-surface materials only. Four (Impression Bay, Fingal, Brown's River and Broadmarsh) possess three or less remaining structures. Paradise Probation Station is a relatively intact archaeological site however no buildings survive to their original height. Cascades Probation Station has numerous extant buildings, including officers quarters, mess hall and cell block, most of which have been well restored and adapted for tourism. The Coal Mines Historic Site, Darlington and Cascades have surface structures that give a comprehensive picture of the operation of a probation station.

Darlington is outstanding as a representation of the probation system with thirteen intact structures in a natural environment setting that has few competing elements. The prisoners barracks and ruins of the separate apartments demonstrate the classification system for convicts, whereby well behaved convicts could live together in dormitories while the worst class was housed in separate cells. The solitary cells demonstrate the use of isolation for punishment. The convict barn, oast house/hop kilns represent some of the task work undertaken by the convicts. The mess hall and school room represent the education of convicts. The chapel, clergyman's quarters and religious instructors quarters depict the focus on religious schooling.

The Coal Mines has substantial ruins that indicate all aspects of the probation system. The ruins of the penitentiary with barracks, solitary cells below the barracks, the officers' quarters, the commanding officer's residence and the military officers' quarters all indicate the administration of the probation system. The solitary cells represent the role of isolation in the management of the most refractory convicts. The importance of the church for the reform and moral development of convicts is evidenced in the ruins of the chapel centrally located with the convict barracks and the ruins of the catechist's cottage. Evidence of convict work is seen in the remains associated with mining operations which include the remains of the original adits, the main pit head with original machinery footings, the boiler and the airshaft, and ground circular depressions which indicate the sites of the 1838, 1842 and 1845 main shafts. The place also contains features relating to the transportation of coal including evidence of the inclined plane which extends from the 1845 shaft on Coal Mine Hill to Plunkett Point, subsidiary inclined planes which appear as modifications to the natural landscape and the remains of wharves and jetties.

While Darlington Probation Station remains an exceptional example of the probation system, the Coal Mines Historic Site is highly significant in that all the elements of the probation station are present in a small contained area in varying degrees of ruin or site identification. The 18 extant solitary alternatiing cells established in 1846 are more intact than the above ground solitary cells at Darlington allowing the Coal Mines to more clearly demonstrate the living conditions of the most refractory

convicts.

Role in the anti-transportation debate and the abolition of transportation
The Coal Mines is of outstanding value because of its important role in the anti-transportation debate.

The 1837 Molesworth Select Committee of the House of Commons found that transportation as a method of minimising crime in the British community had failed and therefore should be abandoned. However, the British Government still had the need to deal with the large number of convicted criminals, and it also wanted to promote the emigration of free settlers to the colonies. With transportation ceasing to New South Wales and the reluctance of other parts of the Empire to take British criminals, Van Diemen's Land became the "Empire's Gaol". The major social issue facing the emerging free society in Tasmania was that they would remain social pariahs if they continued on this path and they used whatever they could to bring the convict system into disrepute.

The anti-transportation league in the colonies used the incidence of homosexuality as a means of swaying British public opinion against the further transportation of convicts. While the authorities understood that the moral issues facing the colony were being exaggerated for this purpose, it nevertheless was concerned about the reports. Reference to homosexuality amongst convicts figured in correspondence between William Gladstone and Charles La Trobe, and Gladstone and Dr John Hampton, the Comptroller General of Convicts (Brand 1990, pp 63-64).

A detailed report on embedded problems of the probation system was made by Charles La Trobe in 1847 at the request of Gladstone who urged him to devote all his mental and physical energies to the struggle with 'this great moral evil' (Brand 1990, p203). His report catalogues the incidence for each probation station. He visited the Coal Mines in October 1846 and noted that 'unnatural crime had been more than ordinarily prevalent for some time past' (quoted in Brand, p.153). As a result more separate apartments were built for the nightly incarceration of convicts and the number of lights in the mines increased threefold (Brand 1990, pp.101-2). A suite of 108 apartments was built giving the Coal Mines the highest proportion of separate apartments to convict population according to La Trobe's returns, indicating the authorities' efforts to address this issue. The population was also reduced but despite these measures the Comptroller General reported in 1848 that 'great care has been taken to prevent unnatural crimes among the convicts at the Coal Mines, yet from the extreme difficulty of maintaining complete surveillance over the men while at work, the Coal Mines always has been in this respect the least satisfactory of all the stations' (The Coal Mines Historic Site, Parks and Wildlife Service). The Coal Mines was closed in 1848 on both moral and financial grounds and subsequently leased to a private operator.

La Trobe's report demonstrated that the probation system was a failure and the section dealing with the all-important question of homosexuality among the convicts (Enclosure no 5) was considered too controversial for public consumption (Brand 1990, p.2). The British Government was faced with the fact that transportation was morally, socially and economically unviable but the government could not build penitentiaries overnight on home soil so transportation continued for several years

before ending in 1853.

The Coal Mines played a key role in the anti-transportation debate because it demonstrated the fundamental flaws in the probation system. It had the highest incidence of homosexuality warranting strong control responses. It was also renowned and feared for its harshness.

The Coal Mines Historic Site **has** outstanding value to the nation against Criterion (a).

Criterion (b) The place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history;

Nominator's claims against the criterion:

1 The Coal Mines are the only penal coal mine in Australia with confirmed substantial evidence, they were the first commercial mines in Tasmania and one of the first in Australia and played a role in the economic confidence of the new colony.

2 The mines contain the beds and footings of with winding and pumping machinery installed in 1845 which represent the earliest pit top workings in Australia.

3 ..is one of the few sites which outstandingly represent the value of convict labour in establishing engineering infrastructure in European colonies

4 The dual role of secondary punishment and an ambitious engineering venture is rare in Australia convict history.

5 The Coal Mines has more above ground evidence of mining activity than at Newcastle….

6 The separate cells are one of the few examples of this type of prison accommodation … possesses the most intact and evocative examples of isolation cellblocks in Australia.

7 One of the last refuges of the Hairstreak Butterfly and the Forty Spotted Pardolate.

Response to the Nominator's Claims

Claim 1 is covered in the assessment. The assertion that it played a role in the colony's economic confidence considered in the assessment against criterion (a) and its recognition as an outstanding representation of the economic value of convicts is assessed against criterion (b). The analysis included a comparison with other coal mining ventures in Newcastle and Tasmania.

Claims 2, 4, 5 and 6 are covered in the assessment against the criterion or against Criterion (d).

The natural values claimed under Claim 7 were analysed using the Australian Natural History Assessment Tool and were not considered to be of national heritage significance.

With regard to the natural values claimed under Claim 7, the Coal Mines Historic Site supports a population of the Hairstreak Butterfly (*Pseudalmenus chlorinda myrsilus*), a taxon that is listed as rare in Tasmania. The population is also present in the adjacent Lime Bay Nature Reserve. To reach the threshold for species rarity under criterion (b), a place must be a focus for rarity in that it contains a concentration of rare or threatened species thus telling a wider story about the importance of the place for the evolution of the Australian biota. For example, there are some 200 sites around

Australia that support 20 or more nationally threatened species of plants and/or animals. The presence of a single rare species is therefore not outstanding in a national context.

The Coal Mines are the only surviving penal coal mines in Australia with above ground evidence of how the coal was extracted, handled, processed and shipped.

It was however not the first penal colliery. A convict coal mining operation was established at Coal River, Newcastle in 1801 and this was followed by a series of mines that were opened in the area all within a mile of Colliers Point. The mine complex operated manually with only a few convict miners with primitive technology. Associated with the mine was a convict stockade lumber yard, and a pier. From 1805 to 1820 the mine produced 21 728 tons of coal. Government operations closed in 1831. The site is no longer extant. Tunnels from the colonial mining operations remain under the entire area of east Newcastle and caused subsidence of the James Fletcher Hospital (Eklund 2005:p.3-4). Bairstow and Davis (1987:p.16) note that like the Tasman Peninsula Coal Mines, the Newcastle mines were used for secondary offenders, but were more primitive. It was also noted that the Newcastle convict mining operation is now an archaeological site and does not have the extant coherence of the Tasman Peninsula mine.

A small convict mining venture operated at Macquarie Harbour in the 1820s and was unsuccessful and short lived (Bacon 1986:p.3). The Coal Mines at Tasman Peninsula was the first successful coal mining operation in Tasmania and one of the first in Australia. The mine produced 60,000 tons of coal but the convict labour was regarded as inefficient, the enterprise largely uneconomic and it was closed on moral and financial grounds, following the Comptroller-General's recommendation in his report of May 1848 (Brand 2003: p91).

By comparison the Coal Mines Historic Site is one of the few Australian convict sites which outstandingly represent the economic role of convicts. It is rare as the only surviving penal coal mines with coherent surface remains and contains features related to the extraction of coal including coal seams visible at the beach, the remains of the original adits, the main pit head with original machinery footings, the boiler and the airshaft, and ground circular depressions which indicate the sites of the 1838, 1842 and 1845 main shafts. The place also contains features relating to the transportation of coal including evidence of the inclined plane which extends from the 1845 shaft on Coal Mine Hill to Plunkett Point, subsidiary inclined planes which appear as modifications to the natural landscape and the remains of wharves and jetties.

The Coal Mines is also rare as the only known surviving extant example of solitary alternating cells. La Trobe in his report on the present state and prospects of convicts in Van Dieman's Land dated May 1847, refers to the complex having 108 separate apartments built of stone and brick with 54 fully completed (Brand 1990: p.185). From the La Trobe report, it can be understood that the Coal Mines had the largest proportion of solitary cells per prisoner population, which is in keeping with the colonial administration's view that the most refractory convicts be sent there. The isolation of convicts was a key measure for the punishment and moral reform of convicts under the probation system but prior to 1846, few separate apartments were

built (Brand 1990: 53). However, this changed with the appointment of Dr John Hampton as Comptroller General of Convicts in January 1846. Hampton advocated an increase in supervision and the proper construction of dormitories to eradicate 'this horrible vice', although he believed it impossible to eradicate in the Coal Mines (Brand 1990: p64). The high number of solitary cells planned for the Coal Mines indicates that Hampton did make the attempt.

Although, no documentary evidence was found of how the convicts felt about their solitary cells, there are reports of their views of the four underground punishment cells contained in the mine itself. A report from 1837 states that the convicts greatly feared these cells which they considered to be akin to being buried alive (Brand 2003: p20).

The Coal Mines Historic Site **has** outstanding value to the nation against Criterion (b).

Criterion (c) The place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history;

Nominator's Claim against Criterion (c)

1. The subsurface and maritime archaeological deposits….provide a unique insight…
2. The oral tradition, documentary evidence have potential for community education.
3. Archival records and collections ...have potential to reveal much of the story..
4. The site has potential for research on the habitat ecology of the Forty Spotted Pardolote and Hairstreak Butterfly.

Response to the Nominator's Claims

Claims 1 and 3 are addressed below.
Claim 2 regarding the potential for community education is regarded as outside the scope of this criterion.
The claim made against Criterion 4 is not considered of NHL significance.

The Coal Mines Historic Site has outstanding potential to yield information about the working and living conditions of convicts subject to hard industrial labour. Other than some late 19th Century mine shafts sunk near the penitentiary, the entire complex has not been impacted by other developments and the workings of the site are extant although reduced to ruins. In this it differs from the Newcastle mines which have been impacted with city development and remain only as archaeological sites.

The surface remains have undergone a detailed above ground survey by Bairstow and Davis in 1986 that synthesised physical evidence and historic data. However the site contains largely unexplored below ground archaeological evidence which because of its integrity and authenticity provides a unique insight into penal mining operations, associated industries and settlement from the material culture perspective unavailable from documentary sources alone. The large collection of documents and archival records from the convict administration are in public records and include reports, letters, maps, plans, paintings and a magistrates bench book that can assist in

understanding the site.

Excavation of the solitary cells could lead to information on the lives and conditions of convicts as has occurred with archaeological work undertaken at the Ross Female Factory on the female convict solitary cells (Eleanor Casella,Ross Female Factory Archaeology Project, www.parks.tas.gov.au/publications/tech/rossarch/arch.html). Given the information arising from the Cascades archaeological research it is highly likely that similar information will be revealed at the Coal Mines site.

The Coal Mines Historic Site **has** outstanding value to the nation against Criterion (c).

Criterion (d) The place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of:
a class of Australia's natural or cultural environments;

Nominators claims against Criterion (d)
1 The ruins…are outstanding in demonstrating the principal characteristics of a convict site. The form and location of elements at the CMHS display deliberate design and arrangement …penal history.
2 The CMHS is important for demonstrating the techniques used in early–mid 19thC colonial British underground mining.
3 The CMHS is an outstanding example of the severity of the convict transportation system and its use to promote law and order.
4 The stone Barracks represent a brief period of imperial confidence…
5 The CMHS is important as one of the collection of Tasman Peninsula probation stations that together present an outstanding collection of convict infrastructure and features.

Response to the Nominators Claims
Claim 1 is covered in the assessment.
Claim 2 assumes the mine is typical of British mines of the period but provides no evidence to substantiate the claim. The place reflects the level of mining technology at a small scale mine but differs from British mines in that it is a Government run penal colliery.
Claim 3 is covered under Criterion (a) as a historical event or process rather than an exemplar of a type.
Claims 3 and 4 are covered in the assessment.

Characteristics of a penal, industrial and administration process demonstrated as a cultural landscape
The place has high integrity for its ability to demonstrate a convict coal mine probation station through its layout, the hierarchical arrangement of the convict structures, Mt Stewart and Coal Mines Hill semaphore locations, the landscape modifications, the use of landscape resources, the evidence of self sufficiency.

The Coal Mines Historic Site is an exemplar of one of several Tasman Peninsula probation stations that were administered from Port Arthur. The Coal Mines Historic Site with the semaphore station and guard house sites is able to demonstrate the

connection. The Tasman Peninsula probation station system is unique for its array of stations.

As an relict cultural landscape of an early 19th century convict coal mine probation station, it demonstrates coherent cultural patterns of the economic, administrative and technical dimensions of the mining operation based on features, spatial organisation, response to the natural environment and ability to illustrate changes to the landscape character. The relict features clearly display the administrative, punitive and industrial working of the convict coal mining probation station. The spatial arrangement of accommodation expressing the hierarchy of officers and their separation from convicts is also expressed at Port Arthur at a much larger scale. Communication features of semaphore wharves and jetties are also present at Port Arthur.

The Coal Mines Historic Site demonstrates a completeness of the penal, industrial and administrative systems within a comparatively compact landscape area with a natural environment setting that has no competing elements.

The place has high integrity for its array of mine sites that trace the story of the mine exploitation, developing from 1833 with two adits to a series of double shafts, the air shaft (also known as the convict well) and the large mechanised pit site of 1848, the peak of exploitation, to the decline of the mining operation until the mine's closure in 1877.

The place has greater authenticity, integrity and visual coherence than any other convict coal mine probation station in Australia.

The Coal Mines Historic Site **has** outstanding value to the nation against Criterion (d).

Criterion (e) The place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;

Nominators claims against Criterion (e)

1 The CMHS presents an outstanding combination of natural beauty and historical complexity. It holds many secrets that beg to be explored.

2 The marine location and views to and from the water; combined with the romantic and at times comprising fine architectural detail are integral elements of both the visual , historical and evocative qualities of the place.

3 The CMHS has had romantic qualities as picturesque ruins set in a marine landscapes and surrounded by native bush.

4 The minimal contemporary infrastructure and the subtle applied interpretation allow visitors a sense of discovery of a scenic place with an abandoned gruesome past.

Response to the Nominator's Claims

In Claims 1-4, the nominator's notes that the place has a combination of natural beauty and historical complexity, has romantic ruins in a picturesque setting and provides a sense of discovery of a scenic place with an abandoned gruesome past. Recognising that there is an aesthetic experience of the bushland/coastal beauty

contrasting with the evocative horrors of the solitary cells, it is noted that evocative confrontations are not considered to be 'aesthetic' according to the DEH legal advice which states that 'aesthetic' means 'beauty'.

The cultural landscape features are blurred from degradation of the structures and the natural vegetation regrowth but this invites exploration, discovery and a challenge in reading the clues of the landscape. At the same time the regrowth of shrubby forest, conveys the image of the landscape as it was when the coal seams were first discovered. Mount Stewart provides a fine viewpoint for panoramic views of the site, its surrounds and Norfolk Bay.

The area was purchased by the Scenery Preservation Board in 1938 for the creation of a public reserve. David Young (1996) notes that the board 'was established for the protection of Tasmania's natural beauty rather than from a concern to protect the convict ruins' in 1915 and was constituted under the Minister for Lands in 1916. However it was the ruins of Port Arthur and the Coal Mines site that encouraged the intervention of the Scenery Preservation Board, in order to protect them for the tourism industry, which had rapidly expanded during the 1920s. Following their reservation in 1939 the Coal Mines were virtually ignored by the SPB for over a decade (Young, 1996:pp.145). The site was extensively pilfered for bricks and cut stone. Although the SPB tried to appoint a caretaker during the 1960s little was done to protect or interpret the site until 1969 when two interpretive signs were erected.

The Owen Stanley's paintings of the site during convict times (in Brand 1990, 2003:p.66) show a predominantly cleared landscape depicting features of the extensive wharf and some of the settlement's buildings. The aesthetic value qualities of the place today are very different to the images painted by Stanley.

Recognising that the scenic qualities are appreciated, the scenic beauty of much of Tasman Peninsula is equally attractive and in some places more spectacular. There is evidence of public appreciation of the aesthetic quality dating from visitor surveys in 1986 (Egloff 1987:43). The survey results concluded that 58% of visitors considered the main attraction of the place was 'history' while 'natural features' was the second major attraction. The Coal Mines Historic Site Management Plan (Parks and Wildlife 1997:21) notes that the scenic quality of the place is an important visitor attraction. A visitor survey in 1994 noted that 1 in 4 people were attracted to the place for its scenic beauty. In this the Coal Mines is no different from other places managed by Parks and Wildlife. There is no evidence that this community appreciation is valued at the national level.

Assessments for the NHL require there to be evidence of aesthetic characteristics of outstanding importance and a demonstration that the characteristics are valued by a community or cultural group. The aesthetic combination of scenic quality and gruesome past claimed by the nominator may well be a strong aesthetic feature. However, legal advice recommends that for national heritage significance, the meaning of 'aesthetic' must be equivalent to 'beauty'.

The Coal Mines Historic Site **does not demonstrate** outstanding value to the nation against Criterion (e).

Criterion (f) The place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period;

Nominators claims against Criterion (f)

1 The CMHS demonstrate the dramatically changing technical aspects in the extraction and transportation of the coal in the early 19th C ….

2 The CMHS demonstrates convict settlement design practices…

3 The presence of some fine architectural detailing …demonstrating the Imperialistic approach of 19th C Britain to even its most far flung and prosaic settlements.

4 The construction of isolation cells in the depth of the mine demonstrates most forcefully the coexistence of industrial endeavour and inhuman punishment. …

Response to the Nominator's Claims

Claim 1 is not addressed. There is no study of technology available that relates to coal and other resources by which we could compare the techniques used at the Coal Mines.

Claims 2 and 3 are addressed below.

Claim 4 is not considered a technical achievement and is analysed under Criterion (b).

The place demonstrates mining technology of the time. There is no evidence to indicate that the design and operation of the mines demonstrate a high degree of creative or technical achievement that is outstanding to the nation. The design of the site also reflects the elements seen in many probation stations, and at Port Arthur.

The claim that the buildings show fine architectural detailing is not supported when compared to the architectural qualities found in buildings at Port Arthur, in the Hyde Park Barracks and at Old Government House and Domain.

Based on the available evidence, the Coal Mines Historic Site **does not demonstrate** outstanding value to the nation against Criterion (h).

Criterion (g)The place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

There are no nomination claims against Criterion (g).

Although the place has high visitation and is appreciated by visitors, there is no evidence of a strong or special association with a particular community or cultural group.

Based on the available evidence, the Coal Mines Historic Site **does not demonstrate** outstanding value to the nation against Criterion (g).

Criterion (h)The place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of

importance in Australia's natural or cultural history.

Nominators claims against Criterion (h)

1 Individuals or groups claimed to have an outstanding association with the CMHS are:

a. The British bureaucrats who create the colonial penal system

b. Convicts whose association at the mines has been illuminated by biographical narratives

c. Governor Arthur

d. Other governors and colonial administrators

e. Lady Jane Franklin

Response to the Nominator's Claims

There is insufficient evidence in the nomination to substantiate the claims made by the nominator.

Other evidence has identified associations with a number of individuals who are important in Australia's history.

Owen Stanley visited the site in 1842 and made illustrative records while the Port Arthur Commandants also visited the place. Their association with the place although important is probably not of outstanding value to the nation.

Dr John Lhotsky had an influential role in the mining operations at the Coal Mines. It was during his 3 months employment by Sir John Franklin, that he produced a detailed plan of the mine *Chart of the Coal Mines on Tasman's Peninsula* (held by the Archives Office of Tasmania) and a report. Whitely (1967) states he produced a geological map of the Tasman Peninsula, possibly one of the earliest scientific surveys of the region (this could be the Chart of the Coal Mines map). Lhotsky's work appears to have been influential on the mining operation but he is not regarded as being an individual of outstanding importance to the nation.

Lieutenant Governor Arthur was the Governor of Van Diemen's Land at the time that the Coal Mines were established as a penal settlement and was involved first hand in the initial settlement, the adit mines, and rules and regulations which gave order to the convict station. While he is signficant as Australia's longest serving colonial Governor and for his role in the development of the initial penal colony of Van Diemen's Land, he is not closely associated with the Coal Mines.

The place is one of 78 probation stations in Van Diemen's Land that were developed from Sir John Franklin's proposal. Sir John Franklin succeeded Governor Arthur as Governor of Van Diemen's land in 1837 and his influence on the coal mines operations included transforming it to a probation station. He managed the system through a difficult time when transportation to New South Wales was abolished, and with a great deal of public opposition to his new methods of convict discipline. He was recalled in 1843 (Fitzpatrick 2006). His association with the CMHS could be considered of outstanding importance in the story of Australia's convict history.

Lady Jane Franklin visited the Coal Mines in 1837 and wrote a review of operations at the penal settlement but this association is not considered to be of outstanding

importance.

The Coal Mines had an association with many several people important at the period. However, from the available evidence the place does not appear to have an association that could be of outstanding value to the nation.

Based on the available evidence, the Coal Mines Historic Site **does not demonstrate** outstanding value to the nation against Criterion (h).

Criterion (i) The place has outstanding heritage value to the nation because of the place's importance as part of Indigenous tradition.

Although there are a number of midden sites, some within the place and others in the locality, these are not considered to be of outstanding heritage value to the nation

History:
Aboriginal
According the reference (Knaggs 2006 quoting Evans 2000 and the Parks and Wild life Service A5 brochure "The Coal Mines Historic Site: Tasmania's first Operational Coal Mine), at the time of first contact with Europeans, the Tasman Peninsula was the country of the Pydairrerme band of the Oyster Bay tribe. The natural environment provided resources for food, shelter, clothing, pigments, tools, weapons, as well as decorative items such as shell necklaces, which contributed to a rich cultural life. Remains of middens and stone artefacts can be found throughout the Tasman Peninsula landscape from this period. At the Coal Mines Historic Site there are numerous artefact scatters and some remnants of shell middens.

The Introduction of the Probation System of Administration and Punishment
The probation system for convict management was introduced as a consequence of the dissatisfaction in Britain with the assignment system which was considered to be too lax, ineffective for reform or deterrence and likened to slavery. The assignment system was phased out between 1838 and 1843 (Brand 1990 in Pearson 2006). The probation system was introduced in existing prisons or small prison settlements established to requirements set by Governor Arthur and continued by Governor Franklin in 1837. The probation system was introduced following the Molesworth Committee report in 1839 that recommended a period of punitive imprisonment, followed by a period of sentence which could be foreshortened by good behaviour. Penal reformers suggested that a system that strictly classified prisoners, with a separate prison for an initial period of confinement, and a comprehensive program of religious and moral instruction (Brand 1990:p.1). Lieutenant Governor Sir John Franklin in 1837 proposed a system of probationary gangs as well as some assignment until convicts completed their sentences. This was approved and implemented in 1839. Regulations for the system were issued in 1843.

The probation system was based on the idea that convicts could make amends and be redeemed for their crimes through systems of controlled labour. Newly arrived convicts were placed in Government work gangs for a fixed period, after which they became eligible for a probation pass. The pass entitled them to work for settlers for

wages, with certain restrictions. After a period of good behaviour in this capacity the convict was eligible for a ticket-of-leave and pardons (conditional and absolute). The system continued, with some modification in 1846, until the cessation of transportation to Van Diemen's Land in 1853. The probation system was never tried elsewhere.

The probation system was considered a greater failure than the assignment system that preceded it as it involved congregating convicts in large parties leading to increased degradation. It also involved heavy capital costs in erecting buildings that included different types of prisoner accommodation, even when materials could be found on site (Brand 1990: p.97).

To be sent to the work at the coal mine was regarded as a punishment for the convicts at Port Arthur, although the work at the mines was no more severe than at Port Arthur and the rations were the same (Besford, 1958 in Bacon 1986:p.4). The punishment rate was high. For the year 1847, 14 000 punishments were meted out to the 400 convicts. These included 728 solitary confinement with bread and water, given out by the superintendent, while the Magistrate imposed 672 punishments of flogging, sentencing to chains or periods of solitary confinement (Hartwell 1954 in Bacon 1986:p.4).

The probation system intended that there be a strict classification of prisoners. Prisoners were to be divided into three classes with different living arrangements; separate confinement to separate cells for 3rd class prisoner, in rooms contained ten men for 2nd class prisoners, and in huts for 20 men for first class prisoners being those whose probation would soon cease. The purpose was to provide punishment work for the convicts away from settled areas (Kerr 1984:146). Issues arose from the need to provide the structured accommodation and Kerr (1984:146) notes how the construction of 100 apartments at the Coal Mines in 1846 were ill-built temporary structures and demolished shortly after completion.

The probation system was based on 2 000 convicts being sent to the colony each year (Brand p.50) but by 1840 the number was over 4 000 and continued at this average for the next four years. To deal with this influx, 78 probation stations were established (Brand p.225) and many did not have the intended facilities of separate cells.

The Coal Mines site was reclassified as a probation station in the early 1840s. The Coal Mines which held up to 600 prisoners between 1841 and its closure in 1848. During this period a new Mining Superintendent reported directly to Hobart rather than to Port Arthur, although the Port Arthur Commandant remained in charge of other aspects of the settlement, including security.

Bairstow and Davies (1987:p.21) noted:

'Until 1841, coal mining was still considered a form of punishment (Brand ms:81-82). In 1841 the Probation system was introduced. Prisoners under probation, if they had mining experience, were sent to the mines (Brand ms: 75). The result was an increase in the skilled work force (Brand ms 80 and 83) but coal production did not increase proportionately.'

By 1838 there were 203 prisoners at the Coal Mines. By 1842-3 there were 579 prisoners at the Coal Mines. In the records of 1846, there were 186 first class prisoners, 82 second class and 104 third class. The prisoners were used for a variety of tasks particularly in infrastructure development. The return of convict stations of 1846 notes 5 blacksmiths, 10 boat crew, 4 brick makers, 8 boat builders, 8 charcoal burners, 15 carpenters, 23 carting, 14 clearing and cultivation, 12 erecting barracks, 2 masons and quarrymen, 5 stone breaking, 5 splitting, 12 sawing, 5 bakers and cooks, 16 servants, 8 in the warehouse, 11 as watchmens,13 as wood and water carriers, others doing miscellaneous tasks, 196 other hard labour (it is assumed that this was mining work).

Due to the influx of convicts and to suit the progressive system of punishment and reform new buildings were constructed as wings to the initial convict barracks creating 1st, 2nd and 3rd class convict quarters all with separate apartments. The old barracks were fitted with sleeping births separated by battens. By 1846 new solitary cells for punishment has been constructed. By 1847 there were 108 separate apartments at the Coal Mines (Brand 1990: copy of Enclosure 2).

During this period the Coal Mines acquired a full complement of civil officers and new masonry houses were constructed for the Superintendent, the catechist and medical officer. An 1842 plan also shows quarters planned for coxswain, a clerk including an office, guardroom, tool stores, boats crew hut and sub-constables quarters. The double storey stone Commissariat Store was constructed c. 1842 as part of the Probation Station improvements, removing the store out of the 'third class' yard.

Many sent to the coal mines during this time had previous mining experience, prior to transportation[1]. The mining operation itself was greatly extended with new shafts; new steam operated pumps and an additional inclined plane railway. Despite this expansion of workings and convicts management was inefficient and coal productions did not increase as intended. In 1847 output was 300 tons per week and of the 403 prisoners present only 196 worked the Coal Mines. (Knaggs 2006 pp.5-6)

The incidence of homosexuality amongst convicts at the station also became a major issue. It figured in correspondence between William Gladstone and Charles La Trobe, and Gladstone and Dr John Hampton, the Comptroller General of Convicts (Brand, pp 63-64). The Coal Mines became a key focus in anti-transportation debates. The dark recesses of the underground workings were believed to be 'sinkholes of vice and infamy'. In an effort to curb such acts, additional lighting was placed in the tunnels, auger holes were made in the doors and shutters of sleeping wards and visits by constables were made at irregular times and 108 separate apartment cells were built in 1846 in an attempt to keep prisoners segregated at night. Additional punishment cells were built below, the remains of which can still be seen today. The Comptroller General reported in 1848 that: …*great care has been taken to prevent unnatural crimes among the convicts at the Coal Mines, yet from the extreme difficulty of maintaining complete surveillance over the men while at work, the Coal Mines always has been in this respect, the least satisfactory of all the stations.* (Knaggs 2006 p.6)

During the fifteen years that the Tasman Peninsula penal colliery operated, methods

employed in social reform as well as mining technology, underwent changes. Conditions for the convict miners were wretched. Prisoners were required to work in the low tunnels while still having their legs 'in irons' and in the early years they were accommodated in cells in the adits. Punishment was administered by flogging, and it was not until after the closure of the penal management of the mines that the punishment system began to moderate. Flogging was finally abandoned in 1848 and replaced by solitary confinement (Becke 1899, and Wiedenhoffer 1981:71 in Egloff 1987:p.35)

Cattle are known to have grazed the site substantiated by the presence of tanning pits (Bairstow and Davies1987:p.34). In 1877 the land near the coal mines was surveyed and described as being 'open heathy land' and near Coal Mine hill, noted as 'having some very good feed' (Egloff 1987:p.36). Large garden areas are shown on a plan of the coal mines site (Brand 1978:p.71).

Despite measures to control homosexuality amongst the miners Reverend Henry Phibbs Fry visited the mines in late 1847 and reported that the miners were still, '...in the habit of committing shocking crimes and that there was no means of putting a stop to their evil practices'. As a result of Fry's efforts to control homosexuality and the inefficiency of the mining operation the Comptroller-General decided to close the mine. On 8 April 1848 an advertisement appeared in the Hobart Town Courier and Gazette seeking private tenders for the lease of the site. The coal mines were then leased to a private operator who used the convict labour assigned to him until as late as 1854.

Coal Mining History

Since the establishment of a colony at Risdon Cove in 1803, most of the coal requirements of Van Diemen's Land (Tasmania) had been transported from New South Wales at great expense. The discovery of a local replacement for this costly import was highly desirable and the Van Diemen's Land authorities promptly investigated any reported findings of coal in the colony.

Because of its rich timber resources and natural prison landscape, Tasman Peninsula was proposed as a prison in 1827 and by 1830 Port Arthur had commenced with dormitories established for prisoners. Charles O'Hara Booth was appointed commandant of Port Arthur and all the stations on Tasman Peninsula in 1833.

Coal was discovered on the Tasman Peninsula coast near Plunkett Point in 1833 by two government surveyors, Woodward and Hughes as a seam 2 m thick. The discovery of the coal deposit not only had the potential to supply the needs of the colony but also provided the administration with a way of punishing rebellious convicts.

Not long after the discovery, a small group of miners, supervised by the convict Joseph Lacey, began work at the site. Joseph Lacey, a convict with practical mining knowledge, was sent with a small party of convict labourers to commence the work in 1833. A shaft was first sunk two to three hundred metres inland and then connected to the coast by an adit (Bairstow and Davies 1987:pp.15-16). In 1837 a drunken skirmish with the master of the *Swan River Packet* nearly cost Lacey his overseer's position. He was reprieved after a written apology to Lt. Stuart, the military officer in charge

of the station, who had reported him. In 1840 Lacey was sent to search for viable coal deposits at Southport (Knaggs 2006).

Mining initially consisted of cutting a drift into the two metre thick coal seam exposed at the coast. Work soon commenced on sinking a shaft some two to three hundred metres inland and the construction of a connection adit to the coast. From 1833-37 mining was carried out with adits driven into the seam. Shafts were sunk at the inland extent of the adits. They extended 21m in and were on two levels. Windlasses were used for extracting water. The mines were shored with local timber. It was carried from the galleries in baskets, emptied into small carts which ran on rails along the adits to a stockpile on the beach. The coal was screened on the beach and then transported in wagons pushed by convicts on tramways to two jetties. Cells for convicts were constructed within the adits while other housing consisting of a timber convict barracks, a brick military barracks and a stone house with outbuildings for the commandant were constructed. The mining sites were linked by roads or tracks to security outposts and to the main settlement (Bairstow and Davies 1987:pp.15-19).

In 1837 Dr John Lhotsky was employed by the Lieutenant-Governor Franklin at 10 shillngs a day to report on the management and situations in which the coal mines could be worked so as to be most productive. He spent 3 months at the probation station when the adits were the mining operation. A chart of the mine was made by Lhotsky in 1837 (Archives Office of Tasmania) showing the extent and branching of the tunnels and the adit. Lhotsky prepared a report in 1837 that recommended removal of Lacey from the charge of operations at the mine, finding another locality with better quality coal and boring to a greater depth (Brand 1978:34). He made a complete geological map of Tasman Peninsula (Whitely 1967). By the end of 1838 the shaft was 150 feet deep and the workings extended for 500 yards, diverging in all directions.

The first shipment of coal left the mine on 5 June 1834 aboard the *Kangaroo* making the Plunkett Point mine the first operational mine in Tasmania. Additional seams were soon discovered and more shafts sunk. Coal was transported from the mine galleries in baskets which were emptied into small carts which ran on rails along the adits to the beach. Here the coal was screened before being transported in wagons pushed by convicts to the end of a jetty. Also in 1834 four underground punishment cells were excavated in the mine close to the bottom of one of the shafts (Knaggs 2006 p13).

Poor quality coal was a constant problem. Thomas James Lempriere, the Commissariat Officer at Port Arthur, complained in 1839 that "*The most disagreeable feature attending Port Arthur coals is that when at first lighted they crack and throw out small pieces in great quantities, to the detriment of carpets, furniture, ladies' gowns etc.*" (Knaggs 2006 p13).

During 1838-41 a double shaft system consisting of a winding shaft and air shaft was operating with a manually operated windlass for removing water. A new shaft constructed in 1841 was over 155ft deep and serviced by a steam engine with boiler. At this time 5 officers and 200 men were employed at the site and 10 817 tons of coal produced. Structures established during this period consisted of stone barracks with solitary cells, a chapel, a school room, a cookhouse, a bakehouse, a washroom and a store. The network of roads increased, additional tramways and a lime kiln were built.

Smithies, masons, quarrymen and charcoal burners were employed. Semaphores were established on Coal Mine Hill and Mt Stewart (Bairstow and Davies 1987:p.21:pp.19-27).

During the 1842-48, the 1841 (also called the 1842) shaft continued to operate and twin shafts were sunk nearby. The new shaft brought into production in 1845 was over 300ft deep. This increased production and was equipped with a steam engine. It was the first mechanised mine in Tasmania and sunk through rock using explosives. It had a workshop, a blacksmiths shop, a large engine complex with a boiler and self acting inclined plane. Coal production averaged 50 tons a day but by 1847, production had slumped to less than half of this amount leading to increased prices for coal in the colony. The increased prices resulted in public protest about the prices and also about the poor quality of the coal.

The underground workings were dark, damp and confined. In 1842 David Burn was lowered down a shaft to inspect the mine: *The winch was manned by convicts under punishment. One stroke of the knife might sunder the rope… however, it has never been tried, deeds of ferocity being very infrequent. A gang on the surface worked the main pump and another below worked a horizontal or slightly-inclined draw-pump which threw water into the chief well… The seam has been excavated 110 yards from the shaft, having also several chambers diverging right and left. The mines are esteemed the most irksome punishment the convict encounters, because he is not a practised miner, and because he labours night and day, eight hours on a spell (Knaggs 2006 pp.8-9.)*

By 1847 the main shaft was down over 300 feet with an extensive system of subterranean tunnels and caverns. The work of extracting the coal was carried out by convicts in two eight hour shifts. The men had to extract 25 tons in each shift to reach the day's quota.

Reverend Henry Phibbs Fry ventured into the depths of the mine in 1847. The scene was 'unforgettable': '*Convicts laboriously worked hand-driven machinery at the mouth of the coal mine. I descended into the mines accompanied by Mr Skene, being let down in a bucket, the shaft is 303 feet deep. On reaching the bottom we would have been in complete darkness but for the lights borne by some men who descended with us. We groped our way with difficulty along passages which are said to be five miles in length. The roof, in many places, is so low, that we were obliged to creep along the passage beneath it. The air was so confined and damp, that our lamps could with difficulty be kept burning and several of them went out… A few lamps at long intervals were attached to the walls, but seemed only like sparks glimmering in the mist, and not many yards from them the passage was in perfect darkness. There were 83 men at work in the mines when I visited them, the greater number employed in wheeling the coal to the shaft to be hoisted up. They worked without any other clothing than their trousers, and perspired profusely. The men in the mine were under the charge of a prisoner overseer and a prisoner-constable… Having had full evidence of the deeds of darkness perpetrated in the mines, I contemplated the naked figures, faintly perceptible in the gloom, with feelings of horror. Such a scene is not to be forgotten.*

The Settlement

Initial buildings at the settlement were of timber and were soon dilapidated which suggests they were only ever proposed to be temporary.

By 1839 the Coal Mines employed 150 prisoners and a detachment of 29 officers was stationed at the mines. The layout of the Coal Mines settlement represents a planning hierarchy typical of convict stations with the security of troops and stores paramount. Large stone barracks, erected in 1838, housed up to 170 prisoners and was built within a fenced compound. Underneath the convict barracks were 16 solitary cells which meant the early timber punishment cells within the mine working were then little used. The Chapel/schoolhouse sat in the centre facing the courtyard wall to the north. The cookhouse, bakehouse, washroom, guardhouse and store completed the stone ensemble. These are the ruined stone buildings set in a U-shape in the main settlement. Allowing surveillance and a degree of separation, the weatherboard military barracks and more comfortable brick buildings housing the officers, surgeon and other officials such as the chaplain, were situated on the hillside above the convict compound. The wives and children of some military and civil officers meant that there were 8 children attending day school at the settlement by 1840.

Due to security problems of having the stores adjacent to the convict barracks, an imposing new stone Commissariat Store was constructed in 1842 at the Plunkett Point Jetty. Although aborted a new hospital and chapel more separate from the prisoners compound was also planned.

By the early 1840s the convict population at the coal mines had increased to 579 and the site had been reclassified as a probation station (Brand 1989:p.73). In the period of 1842-48, a large stone building was built as a commissariat store at Plunkett Point. A new solitary cell complex was constructed with separate apartments built above. New officers quarter, overseers' quarters and cottages were attributed to this period (Egloff 1987:p.35). By 1847 the Coal Mines Station had accommodation for 600 and held 403 men. New accommodation for prisoners was developed west of the main barracks complex, during 1845-47 when a group of 36 solitary cells were constructed and 108 separate apartments that replaced the earlier wooden buildings. La Trobe in his report on the present state and prospects of convicts in Van Dieman’s Land dated May 1847, refers to the complex having 108 separate apartments built of stone and brick with fifty four fully completed (Brand 1990: p.185). Fifteen acres was in cultivation (Evans 1996:p.116).

Besides the men who worked underground extracting the coal, other prisoners were employed in activities typical of the larger Tasmanian convict establishments such as building works, timber getting quarrying, stonemasonry, brick making, lime burning, tanning, blacksmithing, charcoal burning, farming and gardening. Despite the poor soil at the Coal Mines, the 1842 plan of the station shows extensive gardens behind the military barracks and by 1847 15 acres had been planted out. Archaeological remains of some of these industries survive in addition to the mining structures and artefacts.

In 1844 there were 90 children from the families of civil and military officers. Although a schoolroom was proposed it appears it never went ahead. A cemetery for the officers and their families is located at the rear of the Military Officers quarters. The convicts were apparently buried south of the settlement at Turner’s Point (Knaggs

2006 Att.C:pp.4-5).

Transport

Sea transport was the main means of transporting coal and receiving stores. It is presumed that a jetty was in place by 1834 when the first shipment left the site on board the *Kangaroo*. With the construction by 1837 of the convict railway connecting Port Arthur at Long Bay with Norfolk Bay (at the place now known as Taranna) there would have been increased shipping on Norfolk Bay.

The initial jetty opposite the 1833 adit entrance constructed c. 1836 extended 360 ft (110 m) into the bay, however the jetty was too short and waters too shallow to service large vessels. A new pile jetty was constructed 920ft (280.4m) in length that was extended in 1838 to a length of 360yds (329.2m) (Bullers 2005 pp14-15 and (Brand, 1989, pp. 16,17 and 43). Vessels of 300 ton or more could use the new jetty. Lempiere noted in 1838 that a vessel of 100 tons could be loaded in seven hours. By 1843 new jetties had been constructed at the main beach and at Plunkett Point, although by 1847 the latter was in poor repair. Five jetties were constructed during the operational time of the mine.

Amell et al (2005) note that in 1847 the Plunkett Point Jetty was reported to be an insecure state. It was recommended that "a small addition to the side of the coal jetty at a lower level and sweeping around to the Commissariat store for use by steamers" (Bullers, Rick. 2005: p18), be constructed alongside. After numerous efforts over the years to secure and reinforce the jetty, the Plunkett Point jetty collapsed in 1867 in a storm and was washed away. At the time of collapse, there had been 32 wagons of coal standing on it and 18 of these were completely lost (Bullers, Rick. 2005: p19). The tramways were then re-routed to the Commissariat Store jetty (Bullers, Rick. 2005: p19) from which future coal loading services were provided.
Double lines of timber railway tracks ran from the adits to and along the jetties carrying wagons containing 196 lbs of coal. In addition to the jetty railroad Port Arthur Commandant Booth proposed in 1838 a timber railroad one mile and five and a half furlongs long built of stringybark in 3m lengths from the then new shaft to the shaft at Slopen Main. Timber rails guided the coal baskets up and down the main shafts. Self acting tramways with timber rails ran on the inclined planes installed from the 1841-42 and the 1845 main shaft. The wagons on each line of double railroad were connected by rope. As the laden wagons ran down under gravity the empty wagons were hauled up. Requests were repeatedly made for iron tracks on all the railroads and tramways but it appears they were never installed.

Not only was the Tasman Peninsula selected for its isolation, but the Coal Mines themselves were isolated from the main settlement at Port Arthur. From 1834 onwards, there is a gradual criss-crossing of communication systems – signals, roads, tramways, regular boat services. By the 1840s the rash of probation stations strung along Norfolk Bay were in constant communication, sharing both officers and convicts. Shipping remained the main form of transport for people, food and coal.

Maintaining contact between the outstations was crucial for the security of the Peninsula. Commandant Booth at Port Arthur had a passion for signals, and his system, lauded both here and in London as 'an ingenious adaptation of the semaphoric system' consisted of 11 300 notations enabling coding and decoding

messages of actual events such as escapes, arrivals of Governors, etc. Those not part of the penal machine, such as fishermen, rush collectors and duck shooters, were kept firmly off limits.

By the early 1840s a road network existed between the various convict stations on the Tasman Peninsula. Within the Coal Mines settlement roads were essential for the linking of officers residences, convict barracks, the various utilitarian buildings, mine workings and jetties. The current road between the main settlement and Plunkett Point and Lime Bay Road (the road from the settlement to the c. 1841/42 shaft) follow roughly the same alignments as the convict roads. Convict roads also ran from the settlement to Lime Bay, Slopen Main and to Long Point.

There were several recorded escapes and attempted escapes from the mines, including that of the mines overseer, Chartist Zephaniah Williams, and a daring whaleboat hijacking. Attempted escape was one of the most severely punished crimes, and it is probable that many convicts were sent to the Coal Mines for that offence.

Closure

The 1848-77 period marked the time when the mines were leased to private miners who still employed convicts as late as 1854. Old shafts were worked out and new shafts were sunk. By 1877 most of the field had been worked out) although leases were held by prospectors until 1901 (Marshall 1997). By 1900 all mining activity had ceased the buildings were in ruins and pillaged for stone and brick. A total of 60,000 tonnes of coal were extracted from the area during the 44 year life of the mines (Parks and Wildlife 1997:p.8).

Following the closure of the mines in 1877, the cutting of firewood continued as did quarrying for fill and road base material.

The ruins of the mine settlement was purchased by the Scenery Preservation Board (SPB) in 1938 for the creation of a public reserve. The David Young (1996: p.88) notes that initially the board 'was established for the protection of Tasmania's natural beauty rather than from a concern to protect the convict ruins' in 1915 and was constituted under the Minister for Lands. However it was the ruins of Port Arthur and the Coal Mines site that encouraged the intervention of the SPB, in order to protect them for the tourism industry, which had rapidly expanded in the 1920s-30s. Following their reservation in 1939, the Coal Mines were virtually ignored by the SPB for over a decade (Young, 1996:pp.145). The site was extensively pillaged for bricks, cut stone and mining machinery (Parks and Wildlife Service:1997:p.8). The area was added to 1949 and in 1966 (Parks and Wildlife Service, Tasmania 1997). Although the SPB tried to appoint a caretaker during the 1960s little was done to protect or interpret the site until 1969 when two interpretive signs were erected (Young, 1996:p.146).

Condition:

The Coal Mines Historic Site has substantial standing ruins at the main settlement, while the remains of other buildings are foundations or subsurface archaeological evidence. The standing ruins have been stabilised and subject of ongoing monitoring, while the archaeological sites have a generally high level of intactness. The site has

lost some buildings, structures and fabric during the post-convict period.

The industrial nature of the site is represented by the main shaft, complete with original footings of pit-head machinery, and an iron steam pressure vessel. The inclined way of the tramway from main shaft to wharf survives, as does the base of the stone wharf and jetty. Other landscape features including the sites of mine shafts, adits, tramway routes, tanning pits, lime kiln, stone quarry, formed tracks and semaphores are intact. The air shaft is intact.

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