Australian Heritage Database

Places for Decision

Class : Historic

Identification

List:	**National Heritage List**
Name of Place:	Cockatoo Island Convict Site
Other Names:	
Place ID:	105928
File No:	1/12/022/0089
Nomination Date:	30/01/2007
Principal Group:	Law and Enforcement

Status

Legal Status:	30/01/2007 - Nominated place
Admin Status:	26/07/2006 - Under assessment by AHC--Australian place

Assessment

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

Location

Nearest Town:	Rozelle
Distance from town (km):	1
Direction from town:	N
Area (ha):	18
Address:	, Rozelle, NSW 2039
LGA:	Leichhardt Municipality NSW

Location/Boundaries:
About 18ha, in Sydney Harbour, between Birchgrove Point and Woolwich Point, comprising the whole of the Island to low water.

Assessor's Summary of Significance:
Cockatoo Island was established as a place of secondary punishment and hard labour in 1839 by Governor George Gipps. The island contains most of the original buildings from the 1840s constructed by convicts using local sandstone quarried on the island. The Fitzroy Dock, built by convicts and prisoners sentenced in the colony, involved excavation of over 580 000 cubic feet of rock. The buildings, together with

the dock, form a direct association with convict administration and convict public works and are a rare demonstration of their intact relationship. Cockatoo Island is an outstanding and unique example of the success of a local innovation to reduce secondary offenders sentences in exchange for hard labour working in irons on public works.

Cockatoo Island contains Australia's only remaining group of convict built rock cut underground silos (1839-40). The grain silos demonstrate early innovation and creativity in the storage of food in a national response to the severe drought of 1837-39, infrequent shipments and fluctuating wheat prices.

Cockatoo Island is the site of Australia's longest operating dry dock, still in existence, Fitzroy Dock, serving continuously for over 130 years (1857-1991). The construction of Fitzroy Dock on Cockatoo Island represents the ambition of Governor Gipps that the colony would provide the British Royal Navy with the capability to dock ships, previously not possible in the South Pacific. Its construction was also strategic in that it encouraged the British Navy's involvement and commitment to the defence of Australia.

Cockatoo Island developed into Australia's primary shipbuilding facility and became Australia's first Naval Dockyard for the RAN serving between 1913 and 1921, when the administration of the Dockyard was transferred to the Prime Minister's Department. Following the fall of Singapore in 1942 (Britain's main naval facility in the region) Cockatoo Island became the only dockyard in the south-west Pacific where naval construction, turbine work and major ship repairs could be carried out.

Cockatoo Island possesses Australia's only surviving example of a 19th century dockyard to retain some of the original service buildings. It also contains the earliest, most extensive and most varied record of shipbuilding, both commercial and naval, in Australia. Throughout its period of operation, the building was the largest direct current (DC) generating plant in Australia. The powerhouse building, constructed in 1918, contains the most extensive and rare collection of early Australian electrical, hydraulic power and pumping equipment in Australia. The Mould Loft floor has survived with evidence of lofting of ships back to early 20th century. The archaeological potential of the island to reveal insight into the convict period and also the dockyard has been assessed as high by Government Architects Office and Godden Mackay Logan.

Draft Values:

Criterion	***Values***	***Rating***
A Events, Processes	Cockatoo Island is a convict industrial settlement and pre and post-federation shipbuilding complex. It is important in the course of Australia's cultural history for its use as a place of convict hard labour, secondary punishment and for public works, namely its history and contributions to the nation as a dockyard. The surviving fabric related to convict administration includes the prisoners barracks, hospital, mess hall, military	AT

guard and officers room, free overseer's quarters and the superintendent's cottage. Evidence of convict hard labour include the sandstone buildings, quarried cliffs, the underground silos and the Fitzroy Dock.

Cockatoo Island's dockyard, through contribution to Australia's naval and maritime history, demonstrates outstanding significance to the nation. Fitzroy Dock is the oldest surviving dry dock in Australia serving continuously for over 134 years (1857-1991). The dockyard has direct associations with the convict era, Australia's naval relationship with its allies (Britain particularly during the nineteenth and early twentieth centuries) and Australia's naval development, especially during the First and Second World Wars. Cockatoo Island's development into the Australia's primary shipbuilding facility and Australia's first Naval Dockyard for the RAN (1913-21) further demonstrates its outstanding importance in the course of Australia's history.

Fitzroy Dock is outstanding as the only remaining dry dock built using convict and prisoner labour. The dockyard's lengthy 134 years of operation and its significance during both wars, in Australia's naval development and service as the Commonwealth dockyard all contribute to its outstanding value to the nation.

B Rarity	Cockatoo Island's Fitzroy Dock is rare in Australia's history as it is the oldest continually operating dock in Australia and part of the only surviving example of a 19th century dockyard in Australia to retain some of the original service buildings, including the pump house and machine shop, and it is one of the largest convict-era public works surviving in Sydney. The dockyard contains the earliest, most extensive and most varied record of shipbuilding, both commercial and naval, in Australia. This is supported by extensive documentary evidence in the National Archives. The underground silos are of rare and nationally outstanding value as they are the only major group of convict carved rock silos in Australia. They represent a unique example of a convict built structure which indicates the uncertain and precarious conditions facing the colony at the time of drought, fluctuating wheat prices and infrequent food shipments to the colony. The powerhouse, constructed in 1918, contains the most extensive and rare collection of early Australian electrical, hydraulic power and pumping equipment in Australia. Throughout its period of operation, the building was the	AT

	largest direct current (DC) generating plant in Australia. The buildings, chimney and their internal equipment are all important in demonstrating the outstanding significance of the powerhouse.	
C Research	There has been considerable archaeological investigation on Cockatoo Island by the Sydney Harbour Federation Trust (SHFT). This has indicated that it has significant research potential in terms of enhancing the knowledge of the operation of a convict industrial site and a long running dockyard. The surviving archaeological elements of now demolished or obscured structures and functions of the dockyard, in particular the remains of docks, equipment, warehouse and industrial buildings and a range of cranes, wharves, slipways and jetties, have potential to illustrate and reveal the materials, construction techniques and technical skills employed in the construction of shipbuilding and dockyard facilities that are no longer available through other sources in Australia. The archaeological resources also have importance in demonstrating changes to maritime and heavy industrial processes and activities in Australia from the mid-nineteenth century.	AT
D Principal characteristics of a class of places	Cockatoo Island represents some of the principal characteristics of Australian convict sites including: hard labour as a means of punishment and deterrence to the British criminal class; use of convict labour for the establishment of the colony through public works; and secondary punishment for re-offending convicts. Cockatoo Island is of outstanding importance to the nation as a site of severe punishment. The level of severity is expressed through the policy to extend convicts with ‘no indulgence beyond the strict Government ration’. The fundamental purpose of Cockatoo Island was to be the worst possible place imaginable and the ultimate deterrent and is a fine example of a symbol of the harsh treatment used to deter the criminal class in Britain. Fitzroy Dock and its associated excavation and buildings are outstanding examples of the use of convict and prisoner labour for public works. The underground silos, remaining evidence from quarrying and the group of convict built structures on the island are also a testament to public works undertaken by the convicts. Although convicts under various sentences ended up at Cockatoo Island, it was established specifically as, and primarily was a place of secondary punishment for re-offending convicts. Cockatoo Island critically represents the principal	AT

	characteristics of a dual use convict site one that both incarcerates convicts and provides them with hard labour. The values expressed at Cockatoo Island are important for their ability to demonstrate the function, planning layout and architectural idiom and principal characteristics of an imperial convict public works establishment of the 1840s; and the functions, planning layout and architectural idiom and principal characteristics of a range of structures and facilities associated with the development and processes of the dockyard and shipbuilding industry over a period of 134 years.	
F Creative or technical achievement	Cockatoo Island demonstrates a high degree of technical achievement in the construction of the Fitzroy Dock and its surrounding service area. The dock was the earliest graving dock commenced in Australia and was one of the largest engineering projects completed in Australia to that time. Convicts excavated 580 000 cubic feet of rock creating 45 foot (14 metre) sandstone cliffs that extended around the site just to prepare the area for the dock, a huge technical achievement in itself. This was partly achieved by means of large charges of gunpowder fired by electricity, the first time electric firing had been carried out in Australia. The whole and partly exposed underground grain silos are an outstanding example of creativity demonstrating early innovation for the storage of food in an effort to support the colony as self sufficient and independent. Designed by George Barney, the silos were excavated by convict hand into the island's sandstone rock. The grain silos demonstrate an excellent and air tight method of ensuring the quality of the stored produce. The silos are the only major groups of convict carved rock silos in Australia and are therefore an outstanding and rare example reflecting a creative use of the island's natural makeup to compensate for the precarious food supplies of the early years of the colony.	AT

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:
Group: 07 Governing
Themes: 07.06 Administering Australia
Sub-Themes: 07.06.05 Incarcerating people

Group: 07 Governing
Themes: 07.06 Administering Australia
Sub-Themes:

Nominator's Summary of Significance:

Description:
In its original state it was 12.9 hectares in size, however it has been expanded to 17.9 hectares through cutting, filling and reclamation. Almost all of the original vegetation of the island has been removed, and the current vegetation includes plants growing on the quarried cliff faces and planting of exotic species in the garden areas. Its landscape is articulated by man made cliffs, stone walls and steps, docks, cranes, slipways and built forms (GAO CMP:2005:p2).

Cockatoo Island consists of a sandstone plateau up to 79 feet (24 metres) above water level that has been gradually reduced from its original extent by quarrying for sandstone building blocks and excavation for docks and buildings. Spoil from these activities over time has been used to help create the surrounding flat apron areas.

The plateau area can be divided into three main areas dictated by the convict era layout. The western end comprises the **prisoners barracks and hospital** (1839-42) form three sides of an open courtyard with the **mess hall** (1847-51) comprising the fourth side. West of the barracks a formal lawn encloses the roofless **military guard house** (1842), and the **military officers quarters** (1845-57).

The central part has the two **Free Overseers Quarters** and evidence of the Prison Quarry area. The latter has been built over by a group of six large dockyard buildings. The **Electrical shop** is built in the area excavated for the water cisterns. These large buildings plus two concrete elevated water tanks are part of the island's distinctive silhouette.

The eastern end of the plateau is the residential area comprising the remaining convict era structures of the **Superintendent's residence** substantially enlarged in 1860, the **Clerk of Petty Sessions** residence is adjacent to Biloela house. A second free overseers quarters was converted to an air raid shelter in 1942. The rock hewn **silos** are visible only as covers at ground level and two half silos are exposed from prior quarrying. The symmetrical silos are bottle shaped, and an incision on the surface of the rock indicates the diameter of the silo below ground, averaging 19 feet (5.8 metres) deep and 20 feet (6 metres) in diameter. Additions were made to three Federation style residences constructed by the dockyard in 1915-16.

The lower part of the island, which surrounds the central area, has been mostly levelled and developed for dockyard purposes and still accommodates over 80 industrial buildings, concrete pads from demolished buildings, cranes, dry docks and wharf related structures. Many buildings and wharves were demolished after the closure of the dockyard, and this has resulted in large open areas on the northern and eastern foreshores. A detailed description of the remaining buildings, machinery and equipment associated with the dockyard can be found in the Godden Mackay Logan Conservation Management Plan, February 2006.

The apron areas beneath the plateau can also be divided into distinct precincts. The southern area with the two docks Fitzroy Dock and Sutherland Dock:

Fitzroy Dock is an excavated dry dock 472 feet (144 metres) in length and maximum beam of vessel which could be docked is 49 feet (14.8 metres). Its sides are lined and stepped with sandstone masonry blocks to facilitate shoring of ships and access to ships for maintenance and repair. The dock can be pumped out by the electrical pumping plant located in the Powerhouse building and is connected to the pump wells by a deep conduit alongside the Sutherland Dock. Twelve of the original 15 gun barrel bollards remain in place (three are held in storage). The present caisson was completed by the dockyard in July 1932.

The **Sutherland Dock** is an excavated dry dock lined with bluestone concrete blocks (partly replaced by new concrete in the late 20th century). The dock is 686 feet (209 metres) long when the caisson is in the inner fit, 89 feet (27 metres) in breadth and the depth of the water over the sill at high tide is 32 feet (9.75 metres). The lower altars are bluestone concrete, the broad altars and copings are granite and the upper altars sandstone ashlar. A sliding steel caisson was installed in 1975 to replace the original wrought iron caisson.

The eastern area with the large group of interconnected sheds abutting the convict built **Steam Workshop** built at the same time to support the Fitzroy Dock. The northern part of this apron has had its buildings demolished (1991) except for the **Administration Building** adjacent to the Parramatta wharf to the main point of entry to the island.

The northern apron is also devoid of its main buildings and is now a grassed area ending in the two concrete slipways. At the western end of the island is the brick **Powerhouse** with its landmark brick chimney.

Analysis:
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;

Cockatoo Island is important in the course of Australia's cultural history, both as an outstanding demonstration of a 19th century place of secondary punishment and convict public works, and also because of its contribution to Australia's 20th century maritime, and shipbuilding history.

The initial phase of convict occupation (1839-47) represented local responses to the changing penal policies of the British Government. Cockatoo Island demonstrates the implementation of '*An Act for the Conditional remission of Sentences of Convict transported to Norfolk Island and Moreton Bay and to enforce the conditions thereof*' (The Public General Statutes of New South Wales:1838-46) whereby convicts under secondary offences could reduce their sentences in exchange for hard labour working in irons on public works (GOA CMP: 2005:p16).

The extent of the surviving physical fabric on Cockatoo Island provides an

opportunity to understand a place of secondary incarceration. The intact relationship between the buildings, including the living, working and infrastructure for convicts, the military, the superintendent, and free staff, provide an outstanding demonstration of the nature of a secondary place of convict incarceration in NSW in the period 1839-1869 (GAO CMP:2005:p147).

The underground grain silos (1839-40) are of significance to the nation both as a demonstration of the national response to the severe drought of 1837-39, a strategy to reduce the Colony's reliance on the infrequent shipments of grain and to protect the Colony against the resultant fluctuations in the price of wheat (Parker:1977:2). The silos were capable of storing up to 100 000 bushels, or 140 tonnes of grain.

Quarrying the local sandstone in order to build the Fitzroy Dock required the removal of part of the large sandstone outcrop in order to reclaim and clear a shore level space large enough to accommodate the dock. The resultant cliffs have an average height of 45 feet (14 metres) (GOA CMP:2005:p14). By July 1853, 1.5 million cubic feet of rock had been excavated, including 580 000 cubic feet to form the dock itself (Jeremy:1998:p9). The island itself was originally 12.9 hectares in size, but was expanded to 17.9 hectares through the extensive cutting, filling and reclamation (GOA CMP:2005:9). The quarried sandstone was used for all of the early buildings on the island as well as some in Sydney, including the construction of the sea wall of Sydney Cove (Parker:1977:3). A comparison of quarrying of this scale is difficult in Australia's early convict history although the Great North Road might be of equal comparison. Other major quarrying sites include Macquarie Street at Circular Quay, Argyle Cut and Pyrmont, however, these were mostly carried out by private contractors.

Fitzroy Dock demonstrates outstanding strategic importance in the early history of the colony. The dockyard's industrial, maritime and defence uses were of vital importance to Australia for over 130 years. The decision to construct Fitzroy Dock on Cockatoo Island represents the ambition that Sydney would become an important naval depot to provide the Royal Navy with the capability to dock ships, previously not possible in the South Pacific (Jeremy:1998:p19). It marks a change from where the colony sought services or assistance from Britain to one where the colony provided services to Britain. Its construction was also strategic in that it encouraged the British Navy's involvement and commitment to the defence of Australia (Godden et al CMP:2006:p20). Fitzroy Dock is the oldest surviving graving dock in Australia (Birmingham:1984:p31) serving continuously for over 130 years (1857-1991). The dockyard has direct associations with the convict era, Australia's naval relationship with its allies (Britain particularly during the nineteenth and early twentieth centuries) and Australia's naval development, especially during the First and Second World Wars.

Cockatoo Island became Australia's first Naval Dockyard for the RAN serving between 1913 and 1921 (Jeremy:1998:p26). From the start of shipbuilding on Cockatoo Island in 1870 to the completion of the last ship, HMAS *Success*, in 1987, at least 360 ships, boats and other craft were built there. Some fifty vessels were built before the Commonwealth acquired the island in 1913, and thereafter most of the ships and boats built on the island were for the RAN (Jeremy:2006:306). In its 137 year history, Cockatoo Dockyard docked or slipped some 12 000 vessels, more than

any other dockyard in Australia, it built Australia's first steel ship, first modern warship and first all-welded warship and built the largest (at the time) roll on/roll off passenger ship in the world. It was the first Naval Dockyard for the RAN and continued to support and build ships for the Navy for some 80 years through two World wars, Korea and Vietnam. Following the fall of Singapore in 1942 (Britain's main naval facility in the region) Cockatoo Island became the only dockyard in the south-west Pacific where naval construction, turbine work and major ship repairs could be carried out (Godden Mackay:1997 Vol 1:p18). Cockatoo Dockyard was the largest steam turbine builder and repairer in Australia, servicing turbines for ships, power plants, sugar mills, oil refineries and other industries throughout Australia. For over a hundred years, since the late 19th century, Cockatoo Dockyard contributed to the development of Australia by producing products for power stations, bridges, dams, ports, mines and major projects including the Snowy Mountains Scheme. Cockatoo Dockyard provided specialised support for the RAN submarines throughout most of the 20th Century, and in particular for the Oberon-class submarines between 1971 and 1991 when the dockyard had one of the most advanced (non-nuclear) submarine refit facilities in the world. The combination of such a wide range of work in one establishment reflects the strength of the position of Cockatoo Dockyard in the heavy engineering industry of the day.

Cockatoo Dockyard introduced the first formal quality control system in any Australian dockyard and trained many thousands of young Australians through the dockyard apprentice training scheme. Its operation as an engineering enterprise developed and implemented standards of excellence which set best practice benchmarks throughout the country. It was Australia's largest post-World War One Commonwealth employer, and the complexity of its union and guild membership, and the history of its demarcation and industrial disputes, catalysed the Federal Government to establish the first Federal wage and conditions award in Australia and apply it to Cockatoo Island. The Federal award established was the model for many subsequent Federal awards which have operated alongside various state award systems in Australia until very recently (GML CMP:2006:213).

Investigations reveal that at least eight dry docks were built in Australia in the 19th century; Dukes Dock (c 1875) and Alfred Graving Dock (1874) in Victoria, Fitzroy Dock (c 1857), Mort's Dock (c 1856) and Ashby, Newcastle dry dock (c 1899) in NSW, Randell's dry dock South Australia (c 1876), South Brisbane Dock (1881) and Sutherland Dock (1890).

Whilst shipbuilding occurred at other penal settlements including Sarah Island and Port Arthur, none possessed a dry dock or substantial workshops and the level of technology available at Cockatoo Island. Other dry docks of significance in Australia include Alfred dry dock in Melbourne. Constructed in 1864-74, it exhibits stonework comparable to those on Cockatoo Island and is similar in design, however, it was built using free labour (VIC Heritage Register: Online) and virtually all the old buildings associated with the dock have been removed or remodelled (Ireland:1987). Mort's Dock in Balmain was completed one year earlier than Fitzroy, but was built using free labour, and only its outline is visible today. Woolwich dock is of a later era, opening in 1901 and was also constructed with free labour. Garden Island's Captain Cook dock was completed later again in 1945 to fit-out, maintain and repair naval vessels, however, of the two island dockyards, only Cockatoo was engaged in the construction

of ships for the Navy. Fitzroy Dock is more outstanding because of its strong association with the convict era, its lengthy 130 years of operation and its significant role in Australia's naval development, it's contribution during both world wars and service as part of the Commonwealth dockyard.

Cockatoo Island was closely associated with the Nautical Training Ship *Vernon* and its successor *Sobraon* and was these ships' land base for over 35 years from 1871-74 and again from 1877-1911. The concept of the reformatory training ship was introduced by Henry Parkes by legislation in 1867. By 1895 it was the oldest established reformatory in Australasia (GAO CMP 2005:p36). Cockatoo Island now provides the only physical link to this successful training scheme for boys.

Cockatoo Island **has outstanding heritage 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;

Cockatoo Island is outstanding to the nation because of its possession of the only major groups of convict carved rock silos in Australia and several rare examples of Australia's shipbuilding and maritime history.

It is considered that originally 20 silos were hand cut into the island's sandstone rock by convict work gangs, with a total capacity to hold 140 tonnes of grain. They demonstrate fine workmanship and represent hard labour tasks undertaken by convicts under the public works system. The silos represent an attempt to support the colony as self-sufficient in a time of severe drought, fluctuating wheat prices and infrequent food shipments to the colony. This adaptive response also demonstrates the uncertain and precarious conditions facing the colony. In this, the silos differ from the coal mines in Tasmania which also demonstrate self-sufficiency and the Governor Macquarie building which can be seen as representing independence and nation building. The decision by the British Government to stop their use also reflects their concern that storage of grain would interfere with the corn trade and that was more important than provision for the colonies welfare. It also demonstrates the British Government's need for a continuing strong hold over the colony. There are other grain silos in Australia, all of which appear to date from 1840s. Nine silos survive on Norfolk Island, but are only partially rock cut. Silos in Stroud were built of brick, their upper section surrounded by earth mounds. These silos appear to have been used to feed stock if crops failed. The silos at Cockatoo Island are the most outstanding as they are the largest group and they were carved entirely by hand out of solid rock. The Cockatoo Island silos were later used for water storage, their construction permitting this use. There is no documentary record to indicate that the other silos were used for anything else but grain, their construction not permitting water storage (GAO CMP:2005:p91).

There are several aspects of the Fitzroy Dock that make it an outstanding and rare possession of Australia's cultural history. Operating for 134 years, the dockyard at Cockatoo is also the oldest continually operating dockyard in Australia. It also contains the largest convict-era public works surviving in Sydney (Godden et al CMP:2006:p20). It is the only surviving example of a 19th century dockyard in

Australia to retain some of the original service buildings, including the engine room, associated with the dry dock (Ireland:1987:Vol 1 n.p). Further, the dockyard contains the earliest, most extensive and most varied record of shipbuilding, both commercial and naval, in Australia (GOA CMP:2006:p24). The powerhouse, constructed in 1918, contains the most extensive and rare collection of early Australian electrical, hydraulic power and pumping equipment in Australia. Throughout its period of operation, the building was the largest direct current (DC) generating plant in Australia (Balint et al:1982:p14). Many machines, machine tools, works and structures at Cockatoo Island were purpose built and constructed, and so remain unique to Cockatoo Island and its unique role. (Godden et al:2006:p215). Recent cleaning of the floor of the mould loft by the SHFT has revealed the full-size body plans of the last ships lofted at the dockyard and there is evidence that lines scribed into the floor may date back to World War One, although this is still to be confirmed.

Cockatoo Island **has outstanding heritage 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;

Cockatoo Island's potential to yield information that will contribute to an understanding of Australia's cultural history can be found both in its outstanding archaeological potential, in the overlay of extant fabric associated with the penal system administration, convict punishment and maritime history and the extensive documentation of its history.

In 2005 the Government Architects Office completed a Conservation Management Plan (CMP) for the convict era remains for the SHFT. The CMP states:

"Cockatoo Island has a potentially extensive range of archaeological resources associated with the convict occupation of the island, most of which are of exceptional heritage significance. The archaeological resources of Cockatoo Island are particularly important as they form the only remaining physical evidence for some aspects of the system of life and work on the island, including, but not limited to the lumber yard, quarry and free settlers quarters."

In 2006, Goddon Mackay Pty Ltd prepared a CMP on the Cockatoo Island dockyard for the SHFT, the reported states:

"Cockatoo Island's surviving dockyard, industrial, maritime and Defence use layout, buildings, landscape elements, machinery and archaeological resources, collectively and singly, are of high technical and research value. This value is primarily associated with their ability to reveal and demonstrate previous work techniques, processes and practices, but is also associated with their specificity and rarity. The archaeological resources, while not of Exceptional heritage value in their own right, have the potential to provide supporting and sometimes new information about the processes, people and technical aspects of the dockyard and industrial phases of Cockatoo Island not available elsewhere." (Godden et al CMP:2006:p215)

The considerable archaeological analysis by the SHFT indicated that it has significant

research potential. The SHFT intend to carry out planned research and archaeological investigations in the belief that this will contribute immensely to the knowledge of the convict experience on the island and the working of the dockyard and the interpretation of both.

The surviving archaeological resources associated with the island's previous dockyard uses and strategic industrial and military role are of potential national cultural heritage value and significance. The surviving archaeological elements of now demolished or obscured structures and functions, in particular the remains of docks, equipment, warehouse and industrial buildings and a range of cranes, wharves, slipways and jetties, have potential to illustrate and reveal the materials, construction techniques and technical skills employed in the construction of shipbuilding and dockyard facilities that are no longer available through other sources in Australia (Godden et al:2006:214). The archaeological resources also have potential to demonstrate changes to maritime and heavy industrial processes and activities in Australia from the mid-nineteenth century.

There is a rich collection of documentary evidence for the use of the island in all phases of its institutional, penal and dockyard use. These sources document not only the living conditions and daily routines of those on the land, but also provides considerable information about individuals, both bond and free who lived there. There is an equally rich collection of records, drawings and photographs comprising the Cockatoo Dockyard collection in the National Archives of Australia. The collection includes early drawings of the docks, details and drawings of ships built on the island, and is one the most complete and detailed collections of industrial records in Australia. Large organisations such as BHP could have similar large private collections. The SHFT is currently collating the information into detailed histories of the dockyard to make it more accessible. Three volumes have been completed, *The Island Shipyard, Safe to Dive* and *To Build a Ship* and a further volume is planned, describing ship repair on the Island and the development of the docks. This is due to be completed towards the end of 2008. In combination with the existing physical fabric and the potential archaeological remains, these sources allow the history of life on Cockatoo Island to be told in a way that is rarely possible for other sites.

Cockatoo Island **has outstanding heritage 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;

Cockatoo Island represents some of the principal characteristics of Australian convict sites including: hard labour as a means of punishment and deterrence to the British criminal class; use of convict labour for the establishment of the colony such as public works; and secondary punishment for re-offending convicts.

Cockatoo Island meets the characteristics of hard labour as it was a place with 'no indulgence beyond the strict Government ration'. The fundamental purpose of Cockatoo Island was to be the worst possible place imaginable and the ultimate deterrent and is a brutal example and symbol of the harsh treatment and hard labour used to deter the criminal class in Britain.

Cockatoo Island critically represents the principal characteristics of a dual use convict site. Commencing as a place of hard labour for secondary offenders in 1839, for 12 years (1857-1869) its function was both of convict incarceration and a dockyard serving the Royal Navy and commercial vessels. From 1871 the island served not only its primary function as a dockyard, but as a girls reformatory (1871-1879), industrial school for girls (1871-1886), a mooring for the nautical training ship for boys (1871-1911) and again as a prison (1888-1909). It is difficult to compare Cockatoo Island with other places of convict public works or colonial institution that are representative of this type of dual use. Hyde Park Barracks commenced as a dormitory for male convicts from 1819, then functioned as a place of secondary punishment and a depot for reassignment and trial. In 1848 the building was redesigned to receive unprotected unassisted female immigrants. From 1862 it also served as a poorhouse for destitute women and finally as a museum. Hyde Park Barracks demonstrates various uses of a site commencing as a convict establishment, but does not demonstrate the overlap of functions as well as Cockatoo Island.

Cockatoo Island is an outstanding example of the use of convict labour for public works, of which the Fitzroy Dock and its associated sandstone quarrying is a product. The underground silos and the group of remaining convict built structures on the island are also a testament to public works undertaken by the convicts.

Although convicts under various sentences ended up at Cockatoo Island, it was established specifically as, and served as a place of secondary punishment for re-offending convicts. Cockatoo Island demonstrates its function as a site of secondary punishment through evidence of underground solitary confinement cells, overcrowded prisoner barracks and sleeping conditions and tasks of hard labour.

The national heritage values expressed are important for their ability to demonstrate: the function and architectural idiom and principal characteristics of an imperial convict public works establishment of the 1840s; and the functions and architectural idiom and principal characteristics of a range of structures and facilities associated with the development and processes of the dockyard and shipbuilding industry over a period of 134 years.

Cockatoo Island **has outstanding heritage value** to the nation against Criterion (d).

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

The landscape of Cockatoo Island exhibits characteristics arising from the human modification of a natural landform for a range of uses over more than 160 years, from convict prison to reformatory to dockyard and shipyard. The complex layering of heritage elements and unusual natural built visual qualities contribute to the aesthetic characteristics of the island

The southern and northern precincts on the crown of Cockatoo Island are of unusual aesthetic value arising from their elevated location, extensive water and distant views and harmony of form, scale, materials and texture (GAO CMP:2005:p46). The scale

and quality of the engineering works, such as the vertical cliff faces, rock hewn silos, the dry docks and the soaring cranes also exhibit unique aesthetic characteristics. The island itself is a significant visual landmark within the larger context of Port Jackson, the Parramatta River and Metropolitan Sydney. The powerhouse building, cranes, and docks form individual distinctive landmarks within the Sydney Harbour. The spectacular views of the harbour, its foreshores and water based activities all add to the these values.

Cockatoo Island is in a beautiful location and a place where outstanding views across the harbour can be experienced. Despite Cockatoo Island's unique characteristics and visual landmark as an island in the harbour setting, there is no strong evidence of people valuing the views of the place. Industrial features, make it difficult to characterise the island as possessing features of beauty, or features that inspire, emotionally move or have other characteristics that evoke a strong human response by a community or cultural group.

Cockatoo Island **does not** have 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;

Cockatoo Island played an important role in the physical development of the colony. From 1839 convicts laboured on public works, quarrying sandstone not only for the construction of buildings on the island, but supplying much of the stone for construction of the semi-circular quay in Sydney Cove (Godden et al CMP:2006:p204).

Cockatoo Island demonstrates a high degree of technical achievement in the construction of the Fitzroy Dock. The estimates, plans and construction of the dock was lead by Civil Engineer Gother K Mann. Mann was in charge of the dock and its prison work force until the penal establishment closed in 1868 (GAO CMP:2005:p22).

Fitzroy Dock was the earliest graving dock commenced in Australia and was the largest engineering project completed in Australia to that time. Convicts excavated 580 000 cubic feet of rock from the 45 foot (metre) cliffs that extended around the site just to prepare the area for the dock, a huge technical achievement in itself, being solely completed with convict labour. This was achieved by means of large charges of gunpowder fired by electricity, the first time electric firing had been carried out in Australia (Parker:1977:p11).

Construction of the Sutherland Dock also demonstrated a high degree of creative and technical achievement at the time it was built. In an official NSW Government publication in 1886, the Sutherland Dock is referred to: 'The dock is the largest single graving dock yet constructed, and will be capable of receiving the largest vessel afloat' (Docks, Slips and Engineering Establishments of Port Jackson:p5). Its design and construction was outstanding and it remains a fine example of late 19th Century engineering.

The whole and partly damaged underground grain silos are an outstanding example of creativity demonstrating early innovation for the storage of food in an effort to establish the Colony as self sufficient and independent. Designed by George Barney, the silos were excavated by hand into the islands sandstone rock by convict work. The enormous silos are perfectly symmetrical bottle shapes around 19 foot deep, 22 foot wide with a two foot manhole entrance at ground level. The storage method was excellent and the air tight rock enclosures ensured any weevils were killed and the quality remained good (GAO CMP:2005:p18). The silos are the only major groups of convict carved rock silos in Australia (Ireland:1987:Vol 1) and are therefore an outstanding and rare example reflecting a creative use of the islands natural makeup to compensate for the precarious food supplies of the early years of the Colony.

Cockatoo Island **has outstanding heritage value** to the nation against Criterion (f).

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;

'Friends of Cockatoo Island' was a group formed on 30 April 1995 in order to oppose the Federal Government's proposal to sell the island to private interests. Around 120 members, mostly former employees of the dockyard have a strong and special association with Cockatoo Island. Their efforts to save the island from private sale brought Cockatoo Island to the attention of the public and elicited considerable media attention. In response to the work of the group, and other harbour groups, the SHFT came into being. 'Friends of Cockatoo Island' does have a strong and special association with the island, their action has saved the place for the nation. They demonstrate 10 years of interest and attachment.

The large workforce at Cockatoo Island Dockyard was one of the most highly unionised in Australia and 'was at the 'front line' of the nation's industrial development' (GML CMP 2006 p.93). Cockatoo Island also had its own well organised apprentice training scheme that trained thousands of highly skilled apprentices, the majority of whom went on to make their mark in other industrial workplaces (Jeremy: 1998: p 199). Many ex- employees retain a strong association with the island and the area between the two docks was significant as a workforce meeting place.

Cockatoo Island provided vital support to the RAN for many years and has a strong association with the people of the RAN. Cockatoo Island provided specialised support for RAN submarines, was the first Naval Dockyard for the RAN and continued to support and build ships for the Navy for some 80 years through two World wars, Korea and Vietnam. In a commendation speech in 1987, Chief of Naval Vice Admiral Ian Macdougall stated: 'No Navy can operate without dockyard support and for many years most of that support came from Cockatoo Dockyard' (Cockatoo Island Pty Ltd: 1987). Cockatoo Island does have a strong and special association with the RAN.

Cockatoo Island does demonstrate special association with 'friends of Cockatoo Island', ex-employees and the RAN. However, the association is not demonstrated to be outstanding to the nation. There are numerous places in Australia that have been 'saved' by similar campaigns and 'friends' groups, including Luna Park (NSW), Point

Nepean (VIC) and the Rocks (NSW). It hasn't sufficiently been demonstrated that the ex-employees, whether members of 'Friends of Cockatoo Island' or not demonstrate outstanding special association to the nation. The RAN does have a very longstanding relationship with Cockatoo Island, however, it is not demonstrated the RAN constitutes a particular community or cultural group, rather it is a professional group with a working relationship. A particular group within the navy has not been identified to demonstrate a 'caring' association with Cockatoo Island.

Cockatoo Island **does not** have for 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.

The history and development of Cockatoo Island is intrinsically linked to several individuals who are important it's history.

George Gipps was the governor of New South Wales from 1837 until 1846, and instigated and oversaw the establishment of Cockatoo Island as a penal site and a dockyard. Governor Gipps was instrumental in the establishment and construction of Cockatoo Island. To establish if Governor Gipps works on and for Cockatoo Island is of importance in Australia's cultural history, he must be compared to other Governor's of Australia. Governor Macquarie experienced the greatest expansion of the colony, he oversaw significant expeditions and explorations and was a great builder, instituting great public works including the Hyde Park Barracks. It is not considered that Governor Gipps was as or more significant than Governor Macquarie.

The early buildings including the grain silos, mess hall, military guard room and barracks block on Cockatoo were constructed to the design and under the supervision of the commanding royal engineer, George Barney. Barney also contributed to works on Goat and Spectacle Island. Barney was one of many of Sydney's distinguished early builders including Frances Greenway who designed Parramatta Female factory and Hyde Park Barracks. It is not considered that George Barney was more significant than any other royal engineers or architects for his work on Cockatoo Island and is therefore not considered to be of national significance.

Another figure of outstanding national significance is Barney Bede Kieran, a 13 year old delinquent who was committed to the nautical school-ship Sobraon. Kieran took up swimming in the Sutherland dock and island pool. At the Australian championships in 1905, he won six Australasian freestyle titles, broke all the world records making him the greatest swimmer that the world had seen (Biography Online:2006). Australia has had many more Australian champions in swimming and other sports. It is not demonstrated that the achievements of Barney Kieran are more significant than other sportspeople, let alone the association with the place where their training occurred.

Cockatoo Island **does not** have 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 traditions.

There is evidence to suggest that Cockatoo Island may have been used as a fishing base by Aboriginal people before European presence. There is no physical evidence of Aboriginal heritage on the island, and the activities that have taken place and the alteration of the physical landscape make it unlikely that any evidence of Aboriginal use or occupation exists.

The Eora people were the original inhabitants of the Sydney region between Port Jackson and Botany Bay. Cockatoo Island was known to the Eora as *Wa-rea-mah* (Attenbrow:2002)

Cockatoo Island **does not have** outstanding value to the nation against Criterion (i).

History:
Unless otherwise specified, the history is sourced from the Godden Mackay Logan and Government Architects Office CMPs, 2006.

In the early 1820s convict assignment was increased to provide cheap labour to free settlers and to relieve the burden on the British Treasury. For those who continued to offend, or whose crimes were such that they could not be assigned, life was often much harder. A report from Governor Bourke in 1837 on the overcrowded secondary punishment penal establishment at Norfolk Island stated the system of convict management produced 'no real reformation of heart'. This resulted in passing of '*An Act for the Conditional remission of Sentences of Convict transported to Norfolk Island and Moreton Bay and to enforce the conditions thereof*' (The Public General Statutes of New South Wales:1838-46). The Act substituting hard labour for transportation to a place of secondary punishment was introduced in June 1838. Secondary offenders 'of good conduct' who had been sentenced by the colonial courts to Norfolk Island or Moreton Bay could earn conditional remission of parts of their sentences by working in irons on the roads or other public works. The Act made labour available for public works where it was most needed, and remitting sentences reduced costs by removing men from the convict system early. In a climate of changing views about the object of punishment, it also provided a rather different opportunity for prisoner reform (2005 CMP: 2005:16). Cockatoo Island was selected by Governor George Gipps as the ideal location for a place of hard labour; isolated, easy to provision and secure, but not distant and so was 'under the very eye of authority'.

Convict settlement of Cockatoo Island 1839 - 1841
In February 1839, under direction of Governor Sir George Gipps, an initial contingent of sixty commuted prisoners from Norfolk Island was sent to Cockatoo under military escort. The initial establishment was a convict stockade, worked by men in irons, with 'no indulgence beyond the strict Government ration' to construct the convict establishment. By May, convict numbers had increased to 167. The island had ample supply of sandstone for quarrying and more permanent prisoners barracks commenced. Convicts constructed a wharf to receive essential supplies of goods and provisions, extensive terraced gardens and walling and with no fresh source of water, cut water tanks in the rock above the escarpment. In response to drought, fluctuating

wheat prices and infrequent shipments of grain to the colony, Governor Gipps ordered convicts to excavate up to 20 grain silos by hand in solid rock to store grain for future use in the colony. This was later (1841) seen by British Government as an interference with free market forces and all grain was ordered to be sold.

In 1840 transportation to New South Wales was suspended, but it was to be many years before all its convicts ceased to be a burden on the British Treasury. The majority of those who had been transported to New South Wales were assigned, or had tickets of leave, but there remained about 5 000 prisoners who were still under punishment, or who through illness or disability were still maintained by the government.

Governor Gipps responded to the considerable pressure for convict accommodation by gazetting Cockatoo Island in 1841 as a place for the reception of male offenders under sentence of transportation (GAO CMP p4(2.1.6)). Transportation to New South Wales had ended, but the worst offenders were now to housed much closer to the heart of the colony.

The second building phase – 1841-44

With an increasing workforce, the second phase of building construction included permanent accommodation for the military guard and a combined guard house and barracks for 56 soldiers. Two cells under the cookhouse and a range of twelve solitary cells was completed in 1843. The cells were excavated out of solid rock and accessed by ladder through a trap door from above. By 1844 all of the major penal buildings on Cockatoo Island were complete.

In 1842 there were 342 prisoners on the island. With accommodation already overcrowded it was difficult to carry out the only form of classification that had been ordered by the Governor, to keep the Norfolk Island men separate from those who had been sentenced to transportation (State Records NSW in GAO CMP 2005: p20).

The numbers decrease, and increase

Captain Alexander Maconochie's social experiment in penal reform on Norfolk Island meant that it solely received prisoners newly arrived from Britain. Those convicted in New South Wales of transportable offences were sent to Cockatoo Island. The experiment was abandoned in 1844 and all doubly convicted prisoners under sentence of transportation on Cockatoo Island were sent to Norfolk Island. As the remaining convict population of the colony decreased rapidly in the 1840s, the population on Cockatoo Island did likewise, to 85 by 1847. By this time there were no prisoners trustworthy enough to serve as overseers, an integral part of the system. In total, about 1 440 prisoners had been brought to Cockatoo Island from Norfolk Island, the majority of whom had their sentences commuted. Their conduct, Governor Gipps reported, 'both on the Island and after their release from it, has been such as fully to vindicate the Act, indeed to prove in a remarkable degree the policy no less than the mercy of it.' (GOA CMP:2005:21).

In October 1847 Earl Grey sent instructions for as many prisoners as possible to be given tickets of leave or conditional pardons, to relieve the government of the expense of their upkeep. Those who could not be released on such terms would be sent to Van Diemen's Land. Once again, insufficient accommodation for this in Van Diemen's

Land resulted in the use of Cockatoo Island. Norfolk Island would be used for convicts still serving their original sentences and requiring strict coercion, while secondary offenders and those sentenced to punishment, deprived of their tickets of leave or returned from private service, would be placed on Cockatoo Island (2005 CMP: 21).

As Cockatoo Island changed from a British penal establishment to a colonial one, the number of civil officers employed in its administration increased. From 1839 to 1847 the island was run by the Superintendent and his assistant, with security maintained by the military guard and prison labour under the Engineer's Department. All other tasks necessary to run the penal establishment, including the supervision of labour, were carried out by prisoners (2005 CMP: 26).

A dry dock to serve the British Navy

As the population of the colony grew, Governor Gipps among others hoped that Port Jackson might become a naval station for the British Fleet. Cockatoo Island was a sheltered, easily accessible but safe and defensible location surrounded by deep water with a workforce that had been sentenced to hard labour, and identified by Governor Gipps as a the best place in Sydney Harbour for a naval establishment (GAO CMP:2005:p22). Although not sanctioned until 1847, Governor Gipps directed convicts to begin clearing and preparing the island for construction of a dry dock in 1845 (Birmingham:1984:p20). Convicts removed large sandstone rock cliffs with an average height of 45 feet (15 metres), just to clear a level space large enough to accommodate the dock. Construction of the dock commenced in 1851 (Parker:1977:p13). As a distant and remote British settlement, shipping was a vital lifeline for the Australian colonies. The construction of a dry dock within the harbour of Port Jackson 'would be of great and permanent advantage to the Colony' and would be built using prisoner labour (2005 CMP: 22). The Royal Navy contributed to the cost of the dock on the condition the Royal Navy ships had preferential use rights (Jeremy:1998:p19). Gother Kerr Mann was responsible for the design and construction of the dockyard. Work on the dock progressed more slowly than anticipated, with a largely unskilled, and often unwilling prisoner workforce. A strong demand for labour in the Colony following the gold rush, combined with Cockatoo Island's penal status meant that free labour was not an option. The Resident Engineer, under pressure to have the dock completed promptly so it could receive vessels, pushed the prisoners hard, but some refused to work after hours. Alongside the dry dock were engine houses, a police barracks, offices a chapel and a mess room. The dock was finally completed in 1857 and the first ship to use the dock was the survey frigate HMS *Herald*, which docked on 1 December 1857 (Jeremy: 1998:p9). Of equal importance with the dock were its pumps, the machinery for ship repairs and the workshops in which to the house them. By c 1858-59 the engine house and six bays of workshops had been completed (2005 CMP: 26). As soon as the dry dock was finished there were plans to extend it and by 1858 the work was under way. Like the original dock, this took a long time as more of the adjacent cliff had to be excavated.

Overcrowding in the penal establishment became a regular problem and by 1861 around 500 convicts were held in accommodation built for no more than 328 (Kerr:1984:p26). Overcrowded wards and lack of supervision also lead to physical suffering through lack of fresh air and practices 'grossly obscene' between the male prisoners (Kerr:1984:p26).

Dual use – Public Works and Social Institutions
The period from 1869 saw the administration of the prison and dockyard split. The land above the escarpment remained in institutional use under the newly appointed NSW Department of Prisons and the foreshores became dedicated to dockyard use under the Public Works Department.

Disturbing reports concerning the harsh treatment of prisoners had caused considerable public concern for years and in 1869 the penal settlement was disbanded and prisoners were transferred to Darlinghurst. The name was changed to 'Biloela' (Aboriginal for cockatoo) in order to try to present a new image.

From 1871 to 1888 the prison barracks became an industrial school for girls and a separate reformatory for girls under 16 convicted of a crime (Kerr:1984:p9). In 1871 the wooden sailing ship, the NSS *Vernon* moored at Cockatoo Island for the training of delinquent, homeless or orphaned boys in seamanship. An initiative of Henry Parkes, the ship was administered by the Department of Education and housed up to 500 students (Kerr:1984:9). The boys were given an area on the island for recreation with swimming bathes and a vegetable garden to tend (Parker :1977:p8). The dilapidated *Vernon* was replaced in 1891 by the NSS *Sobraon* which remained until 1911. Although kept separate from the dock, later the more trustworthy students were given trade training in some of the dockyard workshops on ship building and repairs (Parker:1977: p8). The girls reformatory was relocated to Watson's Bay in 1879 and the industrial school for girls closed in early 1888.

By the time the last extension of the Fitzroy Dock was completed in 1880, the NSW Parliament, keen to see Australia capable of serving bigger vessels in the Royal Navy, decided to build a new dock (GML CMP:2006:2). Construction of the Sutherland Dock commenced in 1882 and was completed in 1890. It was built by free labour under the guidance of a young engineer, Louis Samuel, who died in 1887 at the age of 26. The work was completed under the supervision of his younger brother Edward. The new dock was a spectacular sight. It was a significant engineering achievement designed to be one of the most advanced docking facilities in the southern hemisphere and is reported to have been able to accommodate the largest ships then in service in the world (Jeremy:2006:1). In an official NSW Government publication in 1886, the Sutherland Dock is referred to: 'The dock is the largest single graving dock yet constructed, and will be capable of receiving the largest vessel afloat' (Docks, Slips and Engineering Establishments of Port Jackson:p5).

With closure of the prison, departure of the school ship and increased international shipping, the shipbuilding, ship repair and engineering activities expanded rapidly and dockyard facilities spread over the whole island. The dockyard at Cockatoo Island was the only one in Australian which was big enough to accommodate (after modification) the flagship of the new Australian Navy, the battle cruiser HMAS *Australia.* The preoccupation with keeping the Royal Navy engaged with the Colonies port facilities would continue into the new century.

Return to a gaol 1888-1909
Overcrowding elsewhere in the colony forced the return of prisoners to Cockatoo Island on 8 June 1888 (Kerr:1984:p11). 'Biloela gaol' was a temporary establishment

to hold habitual petty offenders, vagrants and prostitutes. Although considered 'unsuitable' and 'temporary' they were to remain in penal use for a further 20 years (Kerr:1984:p26). Men were accommodated in convict barracks and females housed in buildings in the lumber yard. By 1889, Biloela housed 85 male and 106 female prisoners, with approximately two thirds in some form of employment. By 1896 Biloela could claim to the be the oldest establishment reformatory in Australasia, with 560 prisoners.

Following Federation in 1901 the name returned back to and has since remained Cockatoo Island (Parker:1977:p5). The male prison section was closed in 1906 and prisoners were transferred to the new Long Bay Gaol. In 1909 female prisoners were similarly relocated to Long Bay. *NSS Sobraon* was relocated in 1911 by the Commonwealth Government for use as a naval training ship and the boys were moved to a boys farm at Gosford (Parker:1977:p5).

Between 1904 and 1908 extensions were made to the shops and yard plant, new slipways were built, and cranes and other machinery were acquired. The formation of the Australian Navy (the RAN from 1911) opened the way for local construction of warships. The first RAN warship built at Cockatoo Island was the destroyer HMAS *Warrego,* completed in 1912. *Warrego* was built in pieces in Scotland and re-assembled in Sydney.

Commonwealth-owned Dockyard

In 1913, the Commonwealth Government purchased Cockatoo Island for the building of major naval vessels as well as for ship repair (Balint et al:1982:p47). It was the first Naval Dockyard for the Royal Australian Navy (RAN) and continued to support and build and service ships for the Navy for some 80 years through two World wars, Korea and Vietnam. In 1928, the Commonwealth Shipping Act 1923 stated that 'where possible, all repairs, construction etc. of Commonwealth vessels to be at Cockatoo Island' (Balint et al:1982:p49). The first steel warship to be wholly built in Australia, HMAS *Huon*, was completed on the island in 1916. Cockatoo dockyard also built the first steel ship ever built in Australia, the tug *Hinton,* in 1886, assembled from imported components.

The period from 1910-19 saw the greatest expansion of the facilities on Cockatoo Island since construction of the docks. Prior to World War One 800-900 men were employed on Cockatoo Island, by the end of the war this had increased to a maximum of 4 085 in December 1919 (Jeremy:1998: p250). In 1918 a large powerhouse and chimney was built to provide electricity to the island. The building housed steam-turbine generating plant, the dock pumping machinery and hydraulic pumps and air compressors for dockyard services.

With the outbreak of World War Two development of the dockyard increased dramatically. From 1933 the dockyard was leased from the Commonwealth by Cockatoo Docks and Engineering Co Ltd and during World War Two the workforce, which reached an average of 3 043 in 1942, was employed on the island fitting out troop ships, building naval vessels and repairing allied warships (Birmingham: 1984:p11,12). After the war the lessee company became a member of the world-wide Vickers Group and dockyard undertook a continuing programme of re-converting ships for commercial service, modernising warships and constructing warships for the

RAN, including the construction of the first all-welded warships to be built in Australia. Cockatoo Island dockyard also built the propulsion machinery for most of these ships. Cockatoo Dockyard was the largest steam turbine builder and repairer in Australia, servicing turbines for ships, power plants, sugar mills, oil refineries and other industries throughout Australia.

For over a hundred years, since the late 19th century, Cockatoo Dockyard contributed to the development of Australia by producing products for power stations, bridges, dams, ports, mines and major projects including the Snowy Mountains Scheme. From 1960 to 1991 the dockyard undertook a long programme of submarine refitting for which special facilities were built in 1969-71. For the last 20 years of operation the refit and maintenance of the RAN's Oberon-class submarines was the main role of the dockyard during which time it had one of the most advanced (non-nuclear) submarine refit facilities in the world.

In its 137 year history, Cockatoo Dockyard docked or slipped some 12 000 vessels, more than any other dockyard in Australia, it built Australia's first modern warship and the largest (at the time) roll on/roll off passenger ship in the world. Cockatoo Dockyard introduced the first formal quality control system in any Australian dockyard and trained many thousands of young Australians through the dockyard apprentice training scheme. The combination of such a wide range of work in one establishment reflects the strength of the position of Cockatoo Dockyard in the heavy engineering industry of the day.

In the run-down prior to closure of the dockyard at the end of 1992, most Commonwealth and company assets were sold, a number of buildings were sold and demolished for scrap, and the docks flooded. Sale of the island was proposed. 'Friends of Cockatoo Island' a group of mainly ex dockyard employees fought the sale and the island became vested in the Sydney Harbour Federation Trust (SHFT).

Condition:
Cockatoo Island has been vacant from all industrial activity since 1992 and many buildings have deteriorated during this time. The various uses of the island since the convict era have resulted in the layering of fabric and some destruction and adaptation of original fabric. The Sydney Harbour Federation Trust commissioned a survey of all external penal settlement building stonework on the island and the results show that it is in good to reasonable condition with the main areas for remediation being mortar joints and some refacing with only minimum stone replacement needed. A program of stonework repairs is scheduled to commence in 2007. Decontamination works have been completed for all buildings.

The buildings and machinery such as cranes are subject to corrosion in the exposed maritime environment and require conservation and maintenance (GMLCMP 2006:134).

The prisoner's barracks was converted to an air raid shelter during World War Two which saw a concrete roof, supported on freestanding internal concrete columns, and blast walls added to the northern and eastern wings. The sequence of finishes and bed arrangements are only partly visible, obscured in many areas by later modifications. The two wards have both been subdivided and their original volumes are not evident.

The eastern quarters building has good stonework, but the building's integrity was significantly reduced through partitioning for later dockyard uses. The southern wing of the barracks, which was used as the infirmary, is in good condition and was fitted out as offices and boardroom for the dockyard. The original roof framing may exist under the existing metal roofing. The courtyard has been covered in bitumen and large puddles are formed during rain. The central division walls largely survive as does evidence of the sequence of institutional colour schemes and plugs in the walls.

The military guard room and kitchen is roofless. Stonework is in sound condition and all external metalwork, for example the iron gun racks and window bars, were conserved in 2000. There is some weed and other vegetation growth.

The mess hall is substantially intact, and the stonework is in mainly good sound condition. Pine floor boards lie on top of original flagged stone flooring, the condition of which is not known. Windows have been elongated to suit dockyard use of the building.

The officers quarters has been added to substantially over time. It is in fair to good condition. The building is divided into two units.

The free overseers' quarters is in fair to good condition and will be the subject of major conservation works (2007-08). The other remaining structure of the three dwellings, has been significantly altered in its conversion to an air raid shelter with only its external and middle interior stone walls remaining.

Biloela House has been divided into two with a wall and is in good condition. It has been re-roofed losing the original separate curved veranda roof profile. This will be rectified when future conservation works take place (2007-08). Stonework of the north and south wings is in mainly good condition.

The clerk of petty sessions cottage The original stone cottage has been extended and the whole building is in fair to good condition.

One intact **silo** is able to be viewed and is in excellent condition. A grill covers the mouth of the silo and rain water has built up inside. No investigations have been done to date to check the condition of the other silos.

Dockyard buildings. Over 80 buildings remain from the dockyard periods. A more detailed description can be found in the Godden Mackay Logan Conservation Management Plan 2006.

Two Dockyard Residences, two brick detailed cottages and a two storey semi detached have been conserved externally in 2001 and are in good condition.

The Drawing Office was the home of the embryonic Australian aircraft manufacturing business. The building is in fair condition and will be the subject of a program of conservation works (2007-08).

The Powerhouse Building brickwork is mostly in good condition. Repairs to windows have been completed and re-roofing will be completed in 2007 to fix current

leaks. The basement area including the pumps has been pumped dry.

The Mould Loft is a steel-framed galvanized iron clad building dating from about 1910. It is possibly the only surviving full-size shipbuilding mould loft remaining in Australia, and is certainly the oldest. Recent cleaning of the floor by the SHFT has revealed the full-size body plans of the last ships lofted at the dockyard and there is evidence that lines scribed into the floor may date back to World War Two, although this is still to be confirmed. Conservation works will be completed during 2007.

The Fitzroy Dock is now filled with water. The sandstone dock has been extended and the floor reconfigured but the original stone altars and coping with gun barrel bollards remain intact. The caisson for Fitzroy dock is in excellent condition as are the 12 bollards. The stonework has been subject to extensive weathering and wear.

The Sutherland Dock stonework has been subject to extensive weathering and wear. Some of the dock's original equipment is still intact, including the steam travelling jib cranes. It is thought the condition of the Sutherland Dock caisson is good.

The Engine House workshops and Pump house, built in a number of stages suffers from rising damp (currently being treated with sacrificial render) and roof leaks. Otherwise this robust building is in fair to good condition.

The Turbine Shop group of steel framed sheds that abut the engine house workshops to the west are in fair to good condition.

The group of five buildings to the east of the engine house workshops varies from fair to good condition.

The group of buildings on the **southern apron** are mainly robust brick structures that are in good condition.

Many items of plant and machinery were sold in 1991. Demolition removed some forty buildings from the island. All slipways existing in the last decades of the dockyards operation are still present. Several other structures are no longer extant including Fitzroy Wharf, Destroyer Wharf, Plate Wharf, Coal Wharf and Cruiser Wharf. New sea walls were constructed at the site of the Cruiser, Destroyer and Plate Wharfs, and around the northern shipyard fill.

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