APPENDIX M

Heritage

Volume 7

Port Kembla Outer Harbour Development

Historic Heritage Assessment and Statement of Heritage Impact

Port Kembla Outer Harbour Development

Historic Heritage Assessment and Statement of Heritage Impact

Prepared for

Port Kembla Port Corporation

Prepared by

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09 February 2010

60039301

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Quality Information

Document	Port Kembla Outer Harbour Development	
Ref	60039301	
Date	09 February 2010	
Prepared by	Peter Howard	Author Signature
Reviewed by	Andrew Cook	Peer Reviewer Signature

Distribution

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Revision History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature

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Executive Summary

AECOM Australia Pty Ltd was engaged to provide professional services to assist in the preparation of an Environmental Assessment for the proposed development project of the Outer Harbour of Port Kembla, NSW. A Preliminary Heritage Assessment was undertaken to determine if heritage posed a constraint to the project. This was done in light of the fact that the Director-General's Requirements for the Part 3A application did not raise any specific heritage issues.

Following the Preliminary Heritage Assessment and EA adequacy review process the need to further define and elaborate on the heritage impact to certain heritage items was identified. AECOM has prepared this Statement of Heritage Impact (SoHI) to outline the nature and effect of any impact on the heritage items identified in the Preliminary Heritage Assessment.

The historic value of jetties 3, 4, and 6 is considered to be low due to intrusive modifications and their relatively poor condition. The retention of these items in their present condition would not be of great benefit to the Outer Harbour area and would impede the proposed development. Removal of the jetties and their replacement with modern structures can be seen as a logical progression in the development of the Outer Harbour, consistent with previous practices of removing outdated wharf structures and upgrading and enhancing port facilities as need and technical ability allows. The historic use of the port as a location for import and export of cargo is not changed, and the development will allow the Outer Harbour to continue to be viable as a working port for years to come.

The historic, research and representative values of the Historical Military Museum and the Breakwater Battery are appreciated by the local community and form a local tourist attraction. They are representative of a local coastal defence installation and historically significant as a site of local defence in the Second World War. It is therefore essential that management of these heritage items is conducted in a manner which retains their significance to the local community and the history of the Port Kembla area. Specifically, it is necessary to ensure that access between the pillbox structure on the western side of the proposed roadway and the rest of the Museum on the eastern side of the proposed roadway is maintained.

The Mobile Block Setting Steam Crane is locally significant as a tangible reminder of the construction of the Outer Harbour. It is also representative of cranes of this class and make which at one time operated throughout the state. It is also believed to be the last remaining of its type extant in the state. Its retention and preservation in a prominent yet historically appropriate location is recommended.

Prior to Major Project Approval the following recommendations are suggested:

Recommendation 1

Prior to the demolition of No.3 Jetty, archival photographic recording to record the jetty in its final form should be undertaken. Photographic recording could take place from the water and from the structure itself provided that adequate safety precautions are taken. It would also be pertinent to construct a comprehensive history of the use of the jetty including historical and recent photographs of the structure and its operation to preserve the knowledge of its operations.

Recommendation 2

Prior to the demolition of No.4 Jetty, archival photographic recording to record the jetty in its final form should be undertaken. A photographic archive of the final operating guise of the jetty would provide a complete picture of the lifespan of the jetty. It would also be pertinent to construct a comprehensive history of the use of the jetty including historical and recent photographs of the structure and its operation to preserve the knowledge of its operations.

Recommendation 3

The Mobile Block Setting Steam Crane is a rare and representative example of such mobile cranes at a state level. It is therefore recommended that a Conservation Management Plan be implemented as soon as possible for the ongoing heritage management of the crane to ensure its continued maintenance in a condition befitting this status. As part of the plan a nomination for its inclusion on the State Heritage Register should be produced.

The following recommendations are made in relation to works proposed as part of the Concept Plan:

Recommendation 4

Prior to the demolition of No.6 Jetty, archival photographic recording to record the jetty in its final form should be undertaken. A photographic archive of the final operating guise of the jetty would provide a complete picture of the lifespan of the jetty. It would also be pertinent to construct a comprehensive history of the use of the jetty including historical and recent photographs of the structure and its operation to preserve the knowledge of its operations.

Recommendation 5

As part of the detailed planning for construction of the new port access road, steps to mitigate the heritage impact to the Historical Military Museum site should be taken. Specifically the road should be designed to limit impacts to accessibility between the concrete pillbox and the museum. Landscaping should be considered to ensure that the visual impact is minimised.

Recommendation 6

The Mobile Block Setting Steam Crane will likely be directly affected by construction of the new road. As part of a Conservation Management Plan the temporary or permanent relocation of the crane should be considered. This would ensure that any potential impact to the crane by road construction is minimised. The relocation and interpretation of the crane should occur in a prominent location in the vicinity of its present location.

1.0 Introduction

1.1 Background

AECOM Australia Pty Ltd was engaged to provide professional services to assist in the preparation of an Environmental Assessment for the proposed development project of the Outer Harbour of Port Kembla, NSW. A Preliminary Heritage Assessment was undertaken to determine if heritage posed a constraint to the project. This was done in light of the fact that the Director-General's Requirements for the Part 3A application did not raise any specific heritage issues.

Following the Preliminary Heritage Assessment and EA adequacy review process the need to further define and elaborate on the heritage impact to certain heritage items was identified. AECOM has prepared this Statement of Heritage Impact (SoHI) to outline the nature and effect of any impact on the heritage items identified in the Preliminary Heritage Assessment.

1.2 Study Area

The Outer Harbour of Port Kembla (Outer Harbour) is located in the south east of Port Kembla in the Wollongong Local Government Area (LGA). The Outer Harbour is located approximately 3 km south of the Wollongong CBD, 80 km south of Sydney CBD and 60 km from Sydney's south west suburbs (**Figure F1**). Port Kembla is the closest bulk cargo port to Sydney.

The eastern and northern breakwaters at Port Kembla forms the Outer Harbour's eastern and northern extent, and the foreshore is bounded by Foreshore Road and Old Port Road to the south and west(**Figure F2**).

Specifically, this SoHI relates to the following heritage items listed on the State Heritage Inventory:

- The Breakwater Battery,
- The Historical Military Museum,
- The Concrete Tank Barriers, and
- The Mobile Block Setting Steam Crane

This SoHI also applies to the following items which are not covered by a heritage listing:

- No.3 Jetty,
- No.4 Jetty, and
- No.6 Jetty.

1.3 Overview of the Outer Harbour Project

Port Kembla Port Corporation (PKPC) proposes to develop the Outer Harbour to attract new trades as well as increase the volume of existing cargoes. The development of the Outer Harbour is intended to maximise available land area and to provide a maximum number of berths suitable for container handling, bulk trades and general cargo.

Development of the Outer Harbour is envisaged to occur in discrete packages of work, with activities associated with the Concept Plan approval anticipated to be completed by 2040, while activities associated with the Major Project approval are expected to commence in 2010.

Concurrent Major Project Approval and Concept Plan Approval is being sought for the development of the Outer Harbour. Activities associated with each of the approvals are illustrated in **Figure F2**.

1.3.1 Major Project

The broad activities to be undertaken as part of the Major Project comprise:

- land reclamation and dredging for the multi-purpose and container terminals, with the exception of an area in the vicinity of Port Kembla Gateway and extending the swing basin;
- construction and operation of the central portion of the multi-purpose terminal including the first berth;
- construction of the berthing facilities for the first container berth;

- demolition of No. 3 Jetty and No. 4 Jetty (Berth 206);
- new road infrastructure to link multi-purpose terminals with Christy Drive and facilitate construction of container terminals;
- rail infrastructure upgrade in South Yard.

Major Project Approval would provide the operation of a new bulk berth while minimising the amount of rock dredging required by locating the berth in areas where the rock levels generally are at below -12ºm PKHD. At the completion of Major Project Approval part of the multi-purpose terminal would be operational.

1.3.2 Concept Plan

The broad activities to be undertaken as part of the Concept Plan comprise:

- Activities to be undertaken as part of Stage 1 (Major Project);
- Demolition of No. 6 Jetty.
- Reclamation and dredging in the vicinity of Port Kembla Gateway;
- Dredging to extend swing basin to facilitate ship movements in and out of the eastern container berths;
- Construction and operation of second and third multi-purpose berths;
- Operation of first container berth;
- Construction and operation of three remaining container berths;
- Road and rail infrastructure.

For the purposes of this heritage and archaeological impact assessment, it is expected that ground surface impacts will occur throughout the Outer Harbour development area. Much of the study area is highly disturbed from the development of previous port infrastructure.

1.4 Project Aims

The aim of this SoHI is to outline what the heritage impacts of the Outer Harbour development would be, and in conjunction with this provide conservation and management options for the heritage items impacted as part of the development.

1.5 Project Team

The Project Team consists of an archaeologist and other specialists from AECOM. Rick Bullers (Professional Archaeologist) managed the assessment and Peter Howard (Graduate Archaeologist) undertook fieldwork and prepared this report. Andrew Cook (Associate Director – Environment) provided QA review of this report. Lee-Anne Bishop and Tim Osborne provided administrative and drafting support.

1.6 Report Structure

The report structure relates to the sections of the report and their contribution to the study:

- **Section 2.0** provides an overview of the methodology used for the assessment;
- **Section 3.0** provides a succinct historical background to the assessment from which an understanding of historical significance will be derived;
- **Section 4.0.** is an overview of the heritage items which will be impacted by the development;
- **Section 5.0** provides results of the field inspection;
- **Section 6.0.** assesses the heritage significance of the items identified in the Preliminary Heritage Assessment;
- **Section 7.0.** provides a Statement of Heritage Impact for each item to be impacted by the development;
- **Section 8.0.** provides concise management recommendations for each of the items to be impacted by the development;

2.0 Assessment Methodology

This Statement of Heritage Impact builds on the Preliminary Heritage Assessment (PHA) undertaken by AECOM (2009). Following the EA adequacy review process the Director-General's representative requested further detail regarding the impact of the development on several heritage items identified in the PHA. This SoHI defines the nature of the impact to the No. 3 Jetty and the No. 4 Jetty which would occur as part of the Major Project application. The SoHI also assesses the impact to items which will be affected as part of the Concept Plan approval, namely the No. 6 jetty, the Historic Military Museum, Concrete Tank Barriers and Mobile Block Setting Steam Crane.

The specific tasks to be undertaken as part of this SoHI include:

- Review of the Preliminary Heritage Assessment and the Director-General's comments in the EA adequacy review.
- A search of the NSW State Records to search for archival information regarding the jetty structures. This will assist in gaining a greater understanding of the construction and change over time related to the jetty structures.
- A search of the archives of the Port Kembla Port Corporation to search for archival information regarding the jetty structures. This will assist in gaining a greater understanding of the construction and change over time related to the jetty structures.
- A search at the Wollongong City Library to locate any further relevant sources to the Port Kembla Outer Harbour area.
- A detailed site inspection to fully determine the nature of the impact the development will have on the identified heritage items.
- Assessment of the level of heritage significance for each item.
- The creation of a Statement of Heritage Impact for each item in line with the guidelines outlined in the *NSW Heritage Manual* (NSW HO and DUAP 1996), and NSW Heritage Office (2002) *Statement of Heritage Impact* detailing the heritage impacts for each item and any mitigation measures which may be undertaken to manage these impacts.

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3.0 Historical Background

The information in this historical background is largely taken from the Preliminary Heritage Assessment (AECOM 2009). It is only brief in nature and is restricted to aspects which are directly relevant to the Outer Harbour project. It will be used to assist in determining what level of heritage significance to ascribe each item, as well as which heritage criteria will relate to each item.

3.1 Development of Jetties in Port Kembla Outer Harbour

Port Kembla Outer Harbour began to take its current shape as early as the 1890s when the original Port Kembla jetty was approaching its limit of operating efficiency. The need for a deepwater port led to the construction of the two large breakwaters which form the Outer Harbour. The *Port Kembla Harbour Act* was passed on 23 December 1898, thereby formally proclaiming the area as a port and setting aside an initial £200,000 for breakwater construction. The eastern breakwater was commenced in 1901 but was not completed until 1930. Work on the northern breakwater commenced in 1912 and was completed in 1925 (McDonald McPhee 1991: 50).

In 1908 the Port Kembla No. 4 Jetty (now known as Berth 206) was constructed to handle materials produced by the Electrolytic Refining and Smelting Company Ltd, which had established works at Port Kembla to take advantage of the port facilities. It originally measured 500 feet long and 51 feet wide, but in 1929 it was extended another 300 feet into deeper water to allow handling of larger vessels (Hoogendoorn 1999: 39-40).

No. 3 Jetty was built in 1940 when the old No. 3 (Port Kembla) Jetty was replaced by the current structure. The new jetty was 750 feet in length and was constructed to service general cargo handling. On completion of the new jetty, the old No. 3 Jetty was demolished.

The No. 6 Jetty, now known as the Gateway Jetty, was completed in 1958 with an overall length of 298 metres (977 feet). By this time there were five large jetties servicing Outer Harbour.

Expansion of the steelworks during the 1950-60s resulted in a need to improve the Port Kembla harbour facilities. This included deepening of the channel and demolition of the Tom Thumb Bridge. In 1956 work commenced on the Inner Harbour, in Tom Thumb's Lagoon, and the harbour was officially opened in 1960. Port Kembla was reliant on the harbour facilities to undertake its function as a port, particularly on its jetties. The Outer Harbour has featured a range of jetties to service the various developing industrial enterprises around the harbour and the broader Illawarra region. Today there are only three jetties in the Outer Harbour remaining operational – the No.3 Jetty, the No. 4 Jetty (Berth 206) and the No.6 Jetty (Gateway Jetty). These jetties were constructed between 1908 and 1958 and represent the changing face of harbour operations within the Outer Harbour basin.

The three jetties are no longer used for their initial purpose, with No. 3 Jetty used as a base for tug boat operations, No. 4 used for Sulphuric Acid imports and No. 6 used for the export of copper concentrates. It is clear that the historical use of Outer Harbour is constantly evolving and requires flexibility in line with the change in demand for various cargoes as well as development of new cargo handling technologies.

The jetties in the Outer Harbour were vital infrastructure for the transhipment of the Illawarra's natural resources to external markets and contributed to the development of lucrative industries in the region.

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4.0 Items to which this Statement Applies

4.1 Items to be impacted

Existing Jetties No. 3 and 4

Existing jetties – No. 3 Jetty and No. 4 Jetty (Berth 206) are to be demolished to accommodate the dredging and reclamation works associated with the Major Project application.

None of the extant jetties are currently listed on the heritage schedules and they were not considered as part of the City of Wollongong Heritage Study (McDonald McPhee et al 1991). No.3 Jetty was constructed in 1940 to replace an older jetty, while No.4 Jetty was constructed in 1908 and extended in 1929. Together with No.6 Jetty, these are the only large jetties in the Outer Harbour which remain operational. The jetties demonstrate the historical development and changing face of the port and the surrounding industrial development during the 20th century.

No.6 Jetty (Gateway Jetty)

The No. 6 (Gateway) Jetty is proposed to be demolished as part of the Concept Plan. This would only occur as part of the Stage 3 development after 2026.

None of the jetties are listed on the heritage schedules, No.6 Jetty was constructed in 1958 and was the last jetty to be constructed in Outer Harbour. The jetties demonstrate the historical development and changing face of the port and the surrounding industrial development during the 20th century.

Break Water Battery, Historical Military Museum and Tank Barriers

Three heritage-listed items are situated in close proximity forming a remnant military precinct at the southern end of the eastern breakwater in reasonable proximity to the existing public carpark and boat ramp. These items are:

- the Breakwater Battery, which consists of two gun emplacements, formerly housing 6" ex-Naval guns, with related underground facilities. It is significant as evidence of coastal defence, especially during World War II;
- the Concrete Tank Barriers, which consist of a group of 900 – 1200 mm high concrete tetrahedron barriers that were originally located at Berkeley Harbour; and
- the Historical Military Museum, which consists of a four storey brick and concrete structure, a gun pill box and an air raid shelter.

The Breakwater Battery and the Concrete Tank Barriers are located within a military reserve to the south east of the proposed site. However, given their distance separation from the site and the context of the surrounding port industrial development, there is not likely to be any direct or indirect (visual) impact to their listed heritage values.

The Historical Military Museum together with the pill box and air raid shelter were heritage-listed for their aesthetic values. The proposed new road construction extending between Darcy Road and the boat harbour car park, along the alignment of a former rail line, is likely to impact on the pill box structure in particular. The pillbox is currently on the western side of a former rail alignment through which it is proposed to construct the new road. The new road has the potential to further separate the pill box from the other elements which make up this heritage item.

Mobile Block Setting Steam Crane

This item was originally used to help construct the eastern breakwater and now lies at the south eastern corner of the boat harbour car park approximately 100 metres to the south east of the proposed site. It is believed to be the only remaining crane of its type and is a rare example of steam crane technology as applied to harbour construction. The item is located on disused rail tracks that once connected Darcy Road with the breakwater.

The item is likely to be affected by the proposed road construction proposed as part of the Concept Plan which will link Darcy Road with the boat harbour carpark. The new road may require this heritage item to be relocated.

4.2 Items which will not be impacted

The following items were identified as part of the PHA and as part of the EA adequacy review phase were identified as requiring more assessment and justification for their exclusion from the impact area.

Shipwreck HMAS Adele

The 288 ton screw steamer *Adele*, built 1906 at Leith in the United Kingdom by Hawthorn & Co., was wrecked at Port Kembla on 7 May 1943 on the breakwater. The wreck is protected under the NSW *Heritage Act 1977* and it is significant as a wreck over 50 years old. The exact location of the wreck is not known, however Hoogendorn (1999:94) places the wreck somewhere on the breakwater. The breakwaters are designed to be dynamic and constantly absorb the impact of heavy swells through ongoing degeneration and repair, so any sign of this wreck will have been destroyed by the swell or buried under new concrete blocks added to the breakwater.

Shipwreck of Ketch Clio

The wooden ketch *Clio* ran aground off the northern breakwater at Outer Harbour on 15 November 1927, whilst carrying a cargo of shell grit. The wreck is protected under the Commonwealth *Historic Shipwreck Act 1976,* it is significant as a wreck over 75 years old. The exact location of the wreck is not known but it is considered unlikely to be located within the Outer Harbour basin. The wreck is listed on Maritime Heritage Online as being off the Northern Breakwater, therefore outside Outer Harbour and not affected by this development.

Justification for these items being outside the impact area

Port Kembla Port Corporation has conducted ongoing bathymetric survey of the Outer Harbour since the early 1980s on an annual basis. The use of side scan sonar technology has ensured that entire area of the harbour beneath mean high water has been surveyed and any objects which were present on the bottom, including shipwreck material, would have been identified as part of this process (Port Kembla Port Corporation, pers. comm. 2009). In addition, the Outer Harbour has been subject to ongoing dredging campaigns which have not encountered shipwreck material.

It is considered that the likelihood of encountering either the *Adele* or the *Clio* within the Outer Harbour basin is low due to the bathymetric coverage and ongoing dredging. In the unlikely event that shipwreck material is discovered then work must cease immediately and contact made with the Maritime Archaeologist at the NSW Heritage Branch, Department of Planning.

5.0 Site Inspection

A site inspection was carried out by Peter Howard on the 17th December 2009. All the items which were deemed to require further assessment were inspected.

5.1 Breakwater Battery

The Breakwater Battery is located at the end of Gloucester Boulevard and comprises former 6" Naval gun emplacements dating to the Second World War. It is located adjacent to the Historical Military Museum and the concrete tank barriers. Together with the museum, the tank barriers and the Block Setting Steam Crane, this item makes up a part of the Port Kembla Heritage Park.

The battery consists of two mass concrete gun emplacements upon which 6" naval guns were mounted. Also present next to the northern emplacement is an underground magazine constructed of brick and concrete. Some conservation work on the magazine is evident, with thick Perspex protective coverings being installed over the original skylights. Some condensation is evident between the Perspex and the skylight. Interpretive signage near the emplacements refers to the location of related defence searchlight batteries nearby, but these sites appear to have been located within the grounds of the new office block to the north of the site.

The battery and associated sites are surrounded by modern development, however the view out to sea is unobstructed. The battery is located approximately 50m to the east of the roadway proposed as part of the Concept Plan

5.2 Historical Military Museum

The Historical Military Museum is located at the end of Gloucester Boulevard. It consists of a four storey brick and concrete structure, made to initially resemble a block of flats, a gun pill box and air raid shelter.

The museum structure initially served as a lookout post for the battery during the Second World War. The structure is apparently constructed so as to look like a block of flats, and the windows on the lower level certainly do resemble those which would have been found on a block of flats of the period. The structure now serves as the Port Kembla Breakwater Battery Museum and is opened twice monthly.

The location of the air raid shelter could not be found during the inspection, but maps of the shelter on the State Heritage Inventory listing suggest that it is likely to be located near the public boat ramp.

A brick and concrete pillbox is associated with the museum and is located approximately 80 m to the south west of the museum building. Landscaped pathways, a former rail corridor and the Mobile Block Setting Steam Crane are located between the museum structure and the pillbox.

The pillbox itself is in poor condition, and exhibits significant cracking and some signs of partial collapse, especially near the lookout windows on the northern side of the structure. Substantial reconstruction with modern fabric has occurred within the pillbox structure as well as around the pillbox, while the pillbox is also located atop a terraced mound which is overgrown and slightly unstable.

5.3 Tank Barriers

The concrete tank barriers are located at the end of Gloucester Boulevard. They were originally placed on beaches at Berkeley Harbour to prevent tank movement.

The tank barriers are located between the gun emplacements of the Breakwater Battery as well as in the area between the emplacements and the Breakwater Battery Museum structure. The barriers located here were originally at Berkeley Harbour and are therefore located out of their original context. They are also not likely located in an area representative of their original use, as they are located at a distance from the waters edge in addition to being located behind an area of rocky shoreline which is unlikely to have been used for tracked military vehicles in any case.

5.4 Mobile Block Setting Steam Crane

The mobile block setting steam crane is located in the carpark at the public boat ramp off Foreshore Road. It is believed to be only such crane type surviving in Australia. It is a rare example of steam technology as applied to harbour construction. The crane is constructed on a rivetted sectional steel frame which houses the steam engine and crane (cable and pulley) mechanism. The crane was originally used in Port Kembla basalt quarries and transferred to the breakwater site for use in constructing and repair of Port Kembla Eastern breakwater from 1901. The maintenance log for the crane lists it as out of use in 1967 (SR Item No.12/3648).

The crane is located on two parallel sections of isolated railway track, with a line of four-wheel dump wagons located on a third parallel track. The crane requires a minimum of two parallel tracks to operate properly as a triangular stability boom sits on a wagon on the second track, while another boom sits on the main track. The stability booms sit on four wheel wagons and are heavily ballasted with concrete blocks to ensure the crane does not tip while loading the dump wagons.

The steam engine consists of an upright boiler powering two vertical cylinders to provide winching, rotational and locomotive power through a series of gears controlled by levers in the cab. The crane appears to have been used to load the dump wagons which were then either pushed onto the breakwater with a locomotive or manhandled into position for tipping. The wagons are configured to either dump forwards (off the end of the breakwater) or to the left or right side to add to the breakwater.

The crane and wagons have been re-interpreted in a fenced off area which is covered with white quartz gravel. The rails are hardly visible beneath the gravel. A landscaped pathway winds around the crane leading from the carpark towards the Breakwater Battery Museum. Some modern fabric appears to have been added to the crane in the form of replacement corrugated iron around the boiler. The driving cogs and metalwork inside the cab are somewhat rusty, but the entire crane appears to have undergone some limited conservation and restoration work as evidenced by the replacement iron sheeting. The crane and trucks would require significant work to make them movable in the event that they require relocation.

5.5 No.3 Jetty

No.3 Jetty was constructed from 1937-1940 and operated until 1983 as a general cargo jetty. Since this time the jetty has functioned as a tug boat mooring berth. Four redundant railway lines remain on the jetty, originally used for the loading and unloading of cargo.

The jetty is constructed with timber piles, cross braces and decking. Some steel augmentation has occurred to the piles in more recent years, although the jetty appears largely unaltered underneath. The deck has undergone substantial modification including the addition of a concrete roadway for stability in more recent years as well as substantial steel grating in order to allow foot access over the jetty in limited form. These modifications are functional and allow the jetty to continue operating in limited form.

A substantial amount of fencing and a security gate have been erected on the top of the jetty for upgraded security as well as to prevent access to condemned parts of the wharf. While the jetty is still functional for a third of its length, it is in relatively poor condition.

5.6 No.4 Jetty

No.4 Jetty was originally 500 feet long as constructed in 1908, however subsequent extension in 1929 brought the total length of the wooden jetty to 800 feet. General cargo diminished in the 1970s and was transferred to the inner harbour and No. 6 jetty.

In 1999 the jetty underwent significant modification in the form of the addition of a concrete berth being constructed off the north western end to handle large bulk liquids ships. In addition to the construction of a concrete berth, this entailed the casting of a concrete roadway on top of the existing deck as well as substantial security upgrades in the form of fencing and steel gates. A pipeline has been erected along the length of the jetty from the new berth to the shore.

The jetty now exists to service the new bulk liquids berth and for the mooring of small pilot vessels. Ships tie onto the concrete dolphins offshore of the jetty and are unable to berth at the old portion of the jetty due to its condition.

The original timber construction of the jetty has been heavily augmented with the use of metal piles and pile wrappings to allow for the continued operation of the jetty. The jetty is obviously modified underneath. The decking has undergone much modification including the construction of a concrete roadway along its length to the bulk liquids berth. The original decking is in poor condition and is unable to be accessed, with most of the original deck fenced off and condemned.

5.7 No.6 Jetty

No.6 Jetty was constructed in 1958 and is therefore the newest of the jetties in the Outer Harbour. Originally constructed as a general cargo and mini-bulk cargo jetty, it continued in this role into the 1980s when the general demise of this kind of cargo handling in favour of containerisation saw the jetty altered for the export of ore concentrates.

Modifications since this time have included the removal of all except one of the moving cranes on the jetty and the construction of a new mobile loader on the base of one of the 17 ton cranes. The most significant modification occurred since 2000 with the addition of a large conveyor type loader for ore concentrates. This loader represents an extensive modification on the south western part of the jetty.

The jetty retains its original concrete deck although the railway lines have been out of commission since 1990 as the jetty is not deemed capable of handling the additional weight of modern rail vehicles. The entire deck is still in commission and in frequent use although the jetty has been operated privately since 1991.

An inspection of the underneath of the jetty was not able to be organised due to the swell and very high tide on the day, as No.6 Jetty is more exposed to the ocean than the other Outer Harbour jetties.

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6.0 Assessment of Significance

6.1 Introduction

An assessment of significance seeks to understand and establish the importance or value that a place, site, or item may have to the community at large. The concept of cultural significance is intrinsically connected to the physical fabric of the item or place, its location, setting and relationship with other items in its surrounds.

The assessment of cultural significance is ideally a holistic approach that draws upon the response these factors evoke from the community. The criteria of evaluating cultural heritage value are generally applied to sites, places or items that have tangible historic structures or relics visible at the site, or where there is general understanding of the extent of the historic resources.

The Australia ICOMOS Charter for the conservation of places of cultural significance (the Burra Charter) was formulated in 1979 and most recently revised in 1999, and is the standard adopted by most heritage practitioners in Australia. The Burra Charter defines a number of categories for the assessment of significance of a place, item or site. These categories include:

- Historical;
- Aesthetic;
- Social;
- Scientific/Technical;
- Rare; and
- Representative.

6.2 Criteria for the assessment of heritage significance

The State Heritage Register, established under the *Heritage Act 1977* (the Act), has a separate set of significance assessment criteria broadly based on those of the Burra Charter. A central feature of the Act is the clarification and strengthening of responsibility for the management of heritage items at the Local and State level. The Heritage Council of NSW recognises the following two levels of significance for heritage in NSW:

- Local; and
- State.

The levels of significance reflect the corresponding statutory listing and responsible authority for the conservation and management of these items (Heritage Office 2008).

To be assessed for listing on the State Heritage Register an item will need to meet one or more of the following criteria:

Table 1: Criteria for the assessment of heritage significance in NSW

Criteria for the assessment of Heritage Significance in NSW	
A Historic	An item is important in the course, or pattern, of NSW's cultural or natural history;
B Associative	An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history;
C Technical / Aesthetic	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW;
D Social	An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons;

Criteria for the assessment of Heritage Significance in NSW	
E Scientific / Technical	An item has the potential to yield information that will contribute to an understanding of NSW's cultural and natural history;
F Rare	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history;
G Representative	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places, or cultural or natural environments.

The Act clarifies and strengthens responsibility for the management of heritage items at the Local and State level. Subsequently, items can be assessed as having Local or State Significance.

It is important to note that an item cannot be excluded from the Register on the grounds that items with similar characteristics have already been listed. Also, these criteria can be applied to items that do not qualify for a State significance ranking, that is, items of Local level significance.

These categories are useful in considering a wide range of heritage items, and can also be applied to sites with the potential to contain archaeological deposits.

6.3 Significance Assessment

Items listed below are assessed against the NSW State Heritage Register criteria for the assessment of historic cultural heritage. A statement of significance is provided based on the assessment as conducted against the criteria. Where an item has been assessed previously this assessment has been included in italics, with additions to the assessment based on the information in this report included in normal text.

6.3.1 No.3 Jetty

A Historic	An item is important in the course, or pattern, of NSW's cultural or natural history;
Port Kembla Outer Harbour No.3 Jetty was a key part of the infrastructure used for the import and export of cargo to Port Kembla. It is a legacy of older methods of coastal shipping using smaller ships and handling smaller loads in the days before better roads took over this transport task. The construction techniques utilised are demonstrative of older methods of jetty construction capable of dealing with smaller coastal vessels handling non-bulk or mini-bulk loads, from the days when Port Kembla was a focus of coastal trade rather than the important import/export port it is today.	

Statement of Significance

Port Kembla Outer Harbour No.3 Jetty has local historic significance for its role in coastal trading and the import and export of cargo at Port Kembla. It is a tangible reminder of previous methods of trade and shipping in the area, and demonstrates superseded methods of jetty construction suited to smaller craft and less substantial loads. It is of an era when Port Kembla was less significant as a port when Sydney maintained a strong coastal shipping and export presence, and there was less need for decentralised major ports. The addition of concrete decking as well as the erection of fencing and structures on the jetty is intrusive to its heritage value.

6.3.2 No.4 Jetty

A Historic	An item is important in the course, or pattern, of NSW's cultural or natural history;
Port Kembla Outer Harbour No.4 Jetty was a key part of the infrastructure used for the import and export of cargo to Port Kembla. It is the oldest standing jetty in Port Kembla Outer Harbour having originally been constructed in 1908 and is a legacy of older methods of coastal shipping using smaller ships and handling smaller loads in the days before better roads took over this transport task. The construction techniques utilised are demonstrative of older methods of jetty construction capable of dealing with smaller coastal vessels handling non-bulk or mini-bulk loads, from the days when Port Kembla was a focus of coastal trade rather than the important import/export port it is today. The jetty has been heavily modified both above and below deck which is a testament to the ever changing needs of the cargo handling task.	

Statement of Significance

Port Kembla Outer Harbour No.4 Jetty has local historical significance for its role in coastal trading and the import and export of cargo at Port Kembla. It is a tangible reminder of previous methods of trade and shipping in the area, and demonstrates superseded methods of jetty construction suited to smaller craft and less substantial loads. It is the oldest of the remaining Outer Harbour jetties, but is also the most heavily modified over its lifespan, demonstrating how port facilities are dynamic and need to constantly evolve to meet changing demands. It is of an era when Port Kembla was of less significance as a port and Sydney maintained a strong coastal shipping and export presence, and decentralised ports had a minor role. The addition of a concrete berth at its north western tip in addition to concrete decking, the installation of a pipe line as well as the erection of fencing and structures on the jetty is intrusive to its heritage value.

6.3.3 No.6 Jetty (Gateway Jetty)

A Historic	An item is important in the course, or pattern, of NSW's cultural or natural history;
Port Kembla Outer Harbour No.6 Jetty was a key part of the infrastructure used for the import and export of cargo to Port Kembla. It is the most recent of the jetties constructed in the Outer Harbour dating to 1958 and was built at the tail end of the coastal shipping era at the end of the period when small cargo items were transferred directly into rail wagons. It is demonstrative of a transition phase of Port Kembla moving from a local coastal shipping and minor import/export location to one of the major ports of NSW tasked with import and export of bulk materials and general cargo. It provides one of the most recent examples of a jetty constructed with timber piles, but also utilising more modern methods with the use of a concrete deck. Modifications to the jetty including the recent construction of a bulk ore loading conveyor are demonstrative of the changing needs of Port Kembla in dealing with new and changing cargoes.	

Statement of Significance

Port Kembla Outer Harbour No.6 Jetty (Gateway Jetty) has local historical significance for its role in coastal trading and the import and export of cargo at Port Kembla. It was built in a transition phase of shipping where coastal shipping was becoming less important and import and export of goods began to take on the major role, as well as a later phase of removal of the shipping task from Sydney Harbour to decentralised harbours such as Port Kembla. The jetty demonstrates superseded methods of jetty construction suited to smaller craft and less substantial loads, and was one of the last major jetties in NSW to employ this means of construction. The jetty has been heavily modified over its lifespan, demonstrating how port facilities are dynamic and need to constantly evolve to meet changing demands.

6.3.4 Breakwater Battery (currently listed on the State Heritage Inventory)

A Historic	An item is important in the course, or pattern, of NSW's cultural or natural history;
This item has historic value (NSW SHI 2700586). The Breakwater battery is a site of coastal defence of the Wollongong area during the Second World War. Together with the Historical Military Museum it provides an understanding of the components of a minor defensive installation from World War Two, however the location of the searchlight batteries appears to have been taken over by modern buildings. It is part of a network of local fortifications comprising Hill 60 to the south and Wollongong Harbour to the north .	
C Technical / Aesthetic	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW;
This item has landmark, group and architectural value (NSW SHI 2700586).	
E Scientific / Technical	An item has the potential to yield information that will contribute to an understanding of NSW's cultural and natural history;
This item has technological value (NSW SHI 2700586). In conjunction with the Historical Military Museum, the Breakwater Battery gives a general understanding of the spatial layout of a standalone coastal defence installation from the Second World War. It is also part of a network of local fortifications comprising Hill 60 to the south and Wollongong Harbour to the north.	
G Representative	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places, or cultural or natural environments.
This item has representative value (NSW SHI 2700586). The Breakwater Battery is representative of a minor Second World War era coastal defence installation.	

Statement of Significance

The Breakwater Battery is of local historic significance in the Wollongong area as a site of coastal defence during World War Two. The Battery has local technical significance as it gives a general understanding of the spatial layout of a coastal fortification of the Second World War. The spatial layout includes the items listed in the Historical Military museum. It is a representative example at the local level of a Second World War era coastal defence installation.

6.3.5 Historical Military Museum (currently listed on the State Heritage Inventory)

A Historic	An item is important in the course, or pattern, of NSW's cultural or natural history;
The Historical Military Museum has local significance as a site of coastal defence of the Wollongong area during World War Two. Together with the Breakwater Battery it provides an understanding of the components of a minor coastal defensive installation from World War Two.	
C Technical / Aesthetic	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW;
This item has landmark, group and architectural value (NSW SHI 2700585). The Museum building is a good example of subterfuge, attempting to camouflage a military building as a block of flats to provide some measure of protection from enemy attack, and concealing the location of the defence installation.	

E Scientific / Technical	An item has the potential to yield information that will contribute to an understanding of NSW's cultural and natural history;
This item has technological value (NSW SHI 2700585). In conjunction with the Breakwater Battery, the museum structure and the concrete pillbox give a general understanding of the spatial layout of a standalone coastal defence installation from the Second World War. The relationship between the items provides some research value.	
G Representative	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places, or cultural or natural environments.
This item has representative value (NSW SHI 2700585). The Museum structure is representative of a type of structure employed on a temporary basis for a specific purpose i.e. as a temporary defensive installation. Its present use as a museum is a means of maintaining that representativeness and encourages access to the public for that purpose.	

Statement of Significance

The Historical Military Museum is of local historic significance in the Wollongong area as a site of coastal defence during World War Two. The Museum building has local technical / aesthetic significance as it provides a good example of subterfuge to disguise the presence of a defence installation. The museum structure and associated defensive installations give a general understanding of the spatial layout of a coastal fortification of the Second World War when viewed in conjunction with the items in the Breakwater Battery, however the pillbox has been intrusively reconstructed with modern fabric, and this affects its heritage significance. The museum site is a representative example at the local level of a Second World War era coastal defence installation, as well as a structure built and used for the specific purpose of defending the local area.

6.3.6 Tank Barriers (currently listed on the State Heritage Inventory)

A Historic	An item is important in the course, or pattern, of NSW's cultural or natural history;
This item has historic value (NSW SHI 2700587). While the tank barriers are locally historic, they are not in their original context, nor are they located in an area which is demonstrative of their original use.	
C Technical / Aesthetic	An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW;
This item has landmark, group and architectural value (NSW SHI 2700587). The concrete tank barriers demonstrate a basic and effective means of obstructing and delaying an invading military force through the use of substantial yet relatively cheap obstructions to free movement.	
E Scientific / Technical	An item has the potential to yield information that will contribute to an understanding of NSW's cultural and natural history;
This item has technological value (NSW SHI 2700587).	
G Representative	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places, or cultural or natural environments.
This item has representative value (NSW SHI 2700587). The tank barriers are representative of a cheap and effective means of defending a potential landing site from a hostile invading military force, although these barriers are not located in an area which is representative of their original use.	

Statement of Significance

The tank barriers are locally historic heritage items, but are not located in their original context, as they were relocated from Berkeley Harbour, in Lake Illawarra. Moreover the barriers are not located in an area demonstrative of their original use, as they are located behind a rocky foreshore which would have been avoided in preference for easier landing sites nearby. The barriers are demonstrative of an effective means of delaying an invading force, and defending a potential landing site with minimal cost and resources.

6.3.7 Mobile Block Setting Steam Crane (currently listed on the State Heritage Inventory)

A Historic	An item is important in the course, or pattern, of NSW's cultural or natural history
This item has historic value (NSW SHI 2700816). The Mobile Block Setting Steam Crane together with the associated dump wagons has local historic significance as a tangible reminder of construction and an earlier phase of ongoing maintenance of the Outer Harbour eastern breakwater. The Breakwater has enabled Port Kembla to become a reliable deep water port in most weather conditions. It has inherent historical significance through its association with the construction and maintenance of the breakwater.	
E Scientific / Technical	An item has the potential to yield information that will contribute to an understanding of NSW's cultural and natural history;
This item has technological value (NSW SHI 2700816). The Crane is a good example of a mid-sized rail-mounted mobile steam crane, a technology which has been superseded in terms of power source by internal combustion and electric engine. Cranes mounted on rails have also been superseded by more flexible mobile road-based cranes .	
F Rare	An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history;
This item has rarity. *Believed to be the only such crane type surviving in Australia. Rare example of steam technology as applied to Harbour construction* (NSW SHI 2700816). The State Heritage Inventory mentions that the Crane is believed to be the only example of its type in Australia. Hoogendorn (1999:13) when discussing the Crane mentions that "the Public Works Department imported many British made steam shovels and cranes for work throughout the late 1890s and early 1900s." As such the Crane is considered to be a rare remaining example of such cranes deployed around NSW for various tasks.	
G Representative	An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments.
This item has representative value (NSW SHI 2700816). The crane is representative of mobile rail based cranes which saw use throughout NSW for a number of applications. This example is particularly representative of steam cranes configured for harbour construction.	

Statement of Significance

The Mobile Block Setting Steam crane is locally significant as a tangible link with construction and earlier phases of maintenance of the Outer Harbour eastern breakwater. The Crane and its associated wagons are rare at a state level as they are believed to be the only remaining type of a class of cranes in operation around NSW and throughout Australia. It is a representative example of a mid-sized mobile steam crane, a class of machinery which was widespread throughout the state during this period. The item is considered to be of state significance for its rare and representative qualities.

7.0 Statement of Heritage Impact

7.1 Requirements of a Statement of Heritage Impact

The objective of a Statement of Heritage Impact (SOHI) is to evaluate and explain how the proposed development, rehabilitation or land use change will affect the value of the heritage item and/or place. A Statement of Heritage Impact should also address how the heritage value of the item/place can be conserved or maintained, or preferably enhanced by the proposed works. This report has been prepared in accordance with the NSW Heritage Office & DUAP (1996a) *NSW Heritage Manual* and NSW Heritage Office (2002) *Statement of Heritage Impact*.

7.2 Proposed Works

Port Kembla Port Corporation (PKPC) proposes develop the Outer Harbour to attract new trades as well as increase the volume of existing cargoes. The development of the Outer Harbour is intended to maximise available land area and to provide a maximum number of berths suitable for container handling, bulk trades and general cargo.

The current Jetties will be demolished and replaced by a new container terminal and a bulk/multi purpose terminal which will allow modernisation and increased capacity and flexibility in the Outer Harbour operations. Jetties 3 and 4 will be demolished as part of the Major Project approval, while No.6 Jetty will be removed as part of later stages of the Concept Plan.

In addition to the construction of the new shipping terminals, enhanced road and rail access to the terminal facilities is also proposed. As part of this, a new road access to the existing recreational boat harbour from Darcy Road is proposed as part of the Concept Plan following the alignment of a disused rail line.

7.3 Assessment of Impact

The following questions are derived from the NSW Heritage Office (2002) *Statement of Heritage Impact* and are applied to the proposed works in order to assess the level and nature of the impact to the heritage items within and adjacent to the study area. Only those questions applicable to the proposed development are applied, and where appropriate have been modified to reflect the requirements of the proposed works.

The following impacts have been assessed as part of this study:

1. Demolition of the existing jetty structures No. 3 and 4 and their replacement with modern container terminal facilities (Concept Plan and Major Project Approval).
2. Demolition of the existing No.6 Jetty and replacement with modern bulk/multipurpose terminals (Concept Plan)
3. Construction of a new access road along an existing disused rail easement in proximity to the Historical Military Museum and the Mobile Block Setting Steam Crane (Concept Plan Approval).

7.3.1 No.3 Jetty

Demolition of a building or structure for construction of a new container berth

Have all options for retention and adaptive re-use been explored for the Jetty?
No.3 Jetty is of an outdated type of construction which is incapable of meeting the demands of a modern port. The jetty has been subject to modifications over recent years in an attempt to further its lifespan, but will never be capable of servicing modern ships or meeting the requirements of a modern cargo port. Retaining the Jetty will compromise the proposed reclamation area for new terminal facilities. It is therefore not possible to retain or re-use the jetty in the development.
Can all of the significant elements of the Jetty be kept and any new development be located elsewhere on the site?

Much of the jetty is condemned due to its poor structural condition. The parts of the jetty which remain serviceable are heavily modified to the point where their significance is substantially impacted. The Outer Harbour is the only location where the proposed development to establish additional port terminal facilities can proceed as sheltered deep water port access is a necessity for the development.
Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?
The condition of the wharf means that even if it were able to be retained temporarily, safety reasons would dictate its removal due to its poor condition, or its reconstruction to such an extent as to impact its heritage significance. The port development cannot proceed without demolition of the jetty as it is located within the footprint of the area which is to be developed as the container terminal.
Has the advice of a heritage consultant been sought? Have the consultant's recommendations been implemented? If not, why not?
AECOM Australia Pty Ltd has been commissioned by Port Kembla Port Corporation to produce a Preliminary Heritage Assessment, and this Statement of Heritage Impact.

7.3.2 No.4 Jetty

Demolition of a building or structure for construction of a new container berth

Have all options for retention and adaptive re-use been explored for the Jetty?
No.4 Jetty is of an outdated construction type which is not capable of berthing heavy modern ships. In recent years substantial modifications have taken place to the jetty superstructure in order to allow it to remain in service. It is unrealistic to place the demands of a modern port operation on this structure, and retention would be counterproductive to the operation of the port. It is therefore not possible to retain or re-use the jetty in the development.
Can all of the significant elements of the Jetty be kept and any new development be located elsewhere on the site?
The jetty has been heavily modified with items which are intrusive to its heritage value such as metal piers, a new concrete roadway and a pipe line. The Outer Harbour is the only location where the proposed development can proceed as sheltered deep water port access is a necessity for the development, so retention is not a realistic heritage management option.
Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?
The development cannot proceed without demolition of the jetty. Conservation is not a realistic heritage management option as the wharf has been heavily modified to allow it to continue to function. The proposed development cannot incorporate the jetty as it is outdated and would severely hinder efficiency of the modern port operation.
Has the advice of a heritage consultant been sought? Have the consultant's recommendations been implemented? If not, why not?
AECOM Australia Pty Ltd has been commissioned by Port Kembla Port Corporation to produce a Preliminary Heritage Assessment, and this Statement of Heritage Impact.

7.3.3 No.6 Jetty

Demolition of a building or structure for construction of a new dry bulk/multi purpose terminal

Have all options for retention and adaptive re-use been explored for the Jetty?
No.6 Jetty is of an outdated construction type which is not capable of meeting the needs of a modern port operation. In recent years substantial modifications have taken place to the jetty superstructure in order to allow it to remain in service. It is unrealistic to place the demands of a modern port operation on this structure and retention would be counterproductive to the operation of the port. It is therefore not possible to retain or re-use the jetty in the development.
Can all of the significant elements of the Jetty be kept and any new development be located elsewhere on the site?
The jetty has been heavily modified with items which are intrusive to its heritage value such as a conveyor type bulk ore loader as well as metal piers. The Outer Harbour is the only location where the proposed development can proceed as sheltered deep water port access is a necessity for the development. Retention is not a realistic heritage management option.
Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?
The port development cannot proceed without demolition of the jetty. Conservation is not a realistic heritage management option as the jetty has been modified to allow it to continue to function. The proposed development cannot incorporate the jetty as it is outdated and would severely hinder efficiency of the modern port operation.
Has the advice of a heritage consultant been sought? Have the consultant's recommendations been implemented? If not, why not?
AECOM Australia Pty Ltd has been commissioned by Port Kembla Port Corporation to produce a Preliminary Heritage Assessment, and this Statement of Heritage Impact.

7.3.4 Breakwater Battery

New development adjacent to a heritage item including construction of a new access road for the port

How is the impact of the new development on the heritage significance of the item or area to be minimised?
The new development would have minimal impact on the Breakwater Battery as it is on the opposite side of a hill, and therefore views and curtilage of the site would not be affected. Public access to the site will be maintained, although as the new road would be in the path of the existing landscaped pathway to the west of the site a new access path will be necessary.
Why is the new development required to be adjacent to a heritage item?
It is necessary to relocate the road as part of the Concept Plan in order to facilitate greater port security while still maintaining public access to the Boat Harbour, Eastern Breakwater as well as the Port Kembla Heritage Park, of which the Breakwater Battery is a part. The road is not able to be located elsewhere as existing structures and other heritage items preclude it being put in another location. The proposed site in the former rail cutting has the least impact on existing sites while still allowing public access between Darcy Road and the Boat Harbour.
How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?
The most important aspects of the heritage item are its view out to sea, as this is the prime need of a coastal defence installation, and its relationship with the former battery control building, which now houses the Historical Military Museum. Both of these relationships are maintained in the new development.
How does the new development affect views to, and from, the heritage item? What has been done to minimize negative effects?

How is the impact of the new development on the heritage significance of the item or area to be minimised?
The new road will be located in a cutting along a former rail alignment. Views inland from the battery will not be affected as the road will not be visible from the battery. Views out to sea are not affected.
Is the development sited on any known, or potentially significant archaeological deposits? What can be done to minimise the impact on the heritage significance of the deposits?
The site is located on a previously disturbed railway alignment. No known or likely archaeological deposits are on the site.
Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?
The new development has minimal impact on the heritage item. It is located in a cutting which removes it from view from the. Extensive modern development surrounds the battery, and the new road will not have any greater impact than the existing development.
Will the public and users of the item, still be able to view and appreciate its significance?
Without construction of the new road, public access to the site will become more difficult. The new road will facilitate continued public access to the site and allow the users to continue to appreciate the significance of this heritage item.

7.3.5 Historical Military Museum

New development adjacent to a heritage item including construction of a new access road for the port.

How is the impact of the new development on the heritage significance of the item or area to be minimised?
The new development would have minimal impact on the Museum structure as its historical function is to look out to sea. As the road is behind the structure to the west and not visible from its windows the historical view would not be affected. The development would impact the access between the Museum structure and the concrete pillbox which is a part of the museum curtilage as it will bisect these two heritage items. However, the heritage significance of the pillbox is affected by intrusive reconstruction using modern materials, and access is currently hindered by the rail cutting.
Why is the new development required to be adjacent to a heritage item?
It is necessary to relocate the road as part of the Concept Plan in order to facilitate greater port security while still maintaining public access to the Boat Harbour, Eastern Breakwater as well as the Port Kembla Heritage Park, of which the Breakwater Battery is a part. The road is not able to be located elsewhere as existing structures and other heritage items preclude it being put in another location. The proposed site in the former rail cutting has the least impact on existing sites while still allowing public access between Darcy Road and the Boat Harbour.
How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?
The most important aspects the heritage item are its view out to sea, as this is the prime need of a coastal defence installation, and the relationship between the defence items associated with the coastal defence installation. The view out to sea is unimpeded by the new development, however the new road passes in between the Museum and the concrete pillbox through an existing rail cutting. Part of the significance of the Museum site is the spatial relationship between the Museum and the pillbox, and this will need to be addressed further when more detailed design for the road takes place.
How does the new development affect views to, and from, the heritage item? What has been done to minimize negative effects?
The new road will be located in a cutting along a former rail alignment. Views inland from the Museum will not be affected as the road will not be visible from the Museum. Views out to sea are not affected. Views from the pillbox towards the sea will not be obstructed, but the road will be plainly visible from the pillbox.

Is the development sited on any known, or potentially significant archaeological deposits? What can be done to minimise the impact on the heritage significance of the deposits?
The site is located on a previously disturbed railway alignment. No known or likely archaeological deposits are on the site.
Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?
The new development potentially impacts access between the heritage items being the museum site and the pillbox. The rail cutting already separates the items to a degree, but any impact can be minimised by allowing for continued access between the museum and the pillbox. This can be addressed in the design of the new road. The spatial arrangement of the items will not be affected by the road, and it is this spatial arrangement which is most valuable for the significance of the site.
Will the public and users of the item, still be able to view and appreciate its significance?
The new road will facilitate continued public access to the site and allow the users to continue to appreciate the significance of this heritage item. Without construction of the new road, public access to the site will become more difficult. However, this impact will need to be mitigated in the road design to ensure that continued access between the heritage items is relatively unimpeded.

7.3.6 Tank Barriers

New development adjacent to a heritage item for construction of a new access road for the port

How is the impact of the new development on the heritage significance of the item or area to be minimised?
The new development would have minimal impact on the concrete tank barriers as it is on the opposite side of a hill, and therefore views and curtilage of the site would not be affected. Public access to the site will be maintained, although as the new road would be in the path of the existing landscaped pathway to the west of the site a new access path will be necessary.
Why is the new development required to be adjacent to a heritage item?
It is necessary to relocate the road as part of the Concept Plan in order to facilitate greater port security while still maintaining public access to the Boat Harbour, Eastern Breakwater as well as the Port Kembla Heritage Park, of which the Tank Barriers are a part. The road is not able to be located elsewhere as existing structures and other heritage items preclude it being put in another location. The proposed site in the former rail cutting has the least impact on existing sites while still allowing public access between Darcy Road and the Boat Harbour
How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?
The road does not impact the Tank Barriers, and will not affect their heritage significance.
How does the new development affect views to, and from, the heritage item? What has been done to minimize negative effects?
The new road will be located in a cutting along a former rail alignment. The road will be visible from the barriers, but extensive modern development surrounds the item and the road would have no greater impact than the existing development.
Is the development sited on any known, or potentially significant archaeological deposits? What can be done to minimise the impact on the heritage significance of the deposits?
The site is located on a previously disturbed railway alignment. No known or likely archaeological deposits are on the site.
Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?

The new development has minimal impact on the heritage item. It is located in a cutting which restricts its visual impact from the barriers, and the new road will allow for continued access to the heritage item. Extensive modern development surrounds the barriers, and the new road will not have any greater impact than the existing development.
Will the public and users of the item, still be able to view and appreciate its significance?
Without construction of the new road, access to the heritage item will become more difficult. The new road will facilitate continued access to the heritage item and allow the users to continue to appreciate its significance.

7.3.7 Mobile Block Setting Steam Crane

New development adjacent to a heritage item including the construction of a new access road for the port

How is the impact of the new development on the heritage significance of the item or area to be minimised?
The new road would be immediately adjacent to and possibly in the path of the steam crane. The road is unable to be placed elsewhere as the former rail cutting provides the only possible access to the area which doesn't compromise security and efficient port operations so the possibility of relocating the steam crane must be explored. As the crane is a movable heritage item its significance would not be impacted as long as it is retained and interpreted near to its present site.
Why is the new development required to be adjacent to a heritage item?
It is necessary to relocate the road as part of the Concept Plan in order to facilitate greater port security while still maintaining public access to the Boat Harbour, Eastern Breakwater as well as the Port Kembla Heritage Park, of which the Steam Crane is a part. It is not able to be located elsewhere as existing structures and other heritage items preclude it being put in another location. The proposed site in the former rail cutting has the least impact on existing sites while still allowing public access between Darcy Road and the Boat Harbour.
How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?
The item is currently located on a stretch of land between the start of the breakwater and the cutting leading to the quarry from where stone for the breakwater was procured. Any relocation of the crane should maintain this alignment as it is in keeping with the way the crane operated historically.
How does the new development affect views to, and from, the heritage item? What has been done to minimize negative effects?
The relocation of the crane would not greatly impact the views to and from the heritage item, and may in fact enhance the views to the item if it is placed in a more prominent position.
Is the development sited on any known, or potentially significant archaeological deposits? What can be done to minimise the impact on the heritage significance of the deposits?
The site is located on a previously disturbed railway alignment. No known or likely archaeological deposits are on the site.
Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?
The new road will require the heritage item to be relocated away from the impact area. As the crane is an item of movable heritage this will not be a significant issue provided that the crane is not removed from its historical alignment between the start of the breakwater and the cutting leading to the quarry.
Will the public and users of the item, still be able to view and appreciate its significance?
The item should be moved to a location where it could be accessed for the purposes of viewing and appreciation. If the item is moved to a more prominent location this will enhance the appreciation of its significance.

7.4 Summary

Items which are not subject to heritage listing

The historic value of jetties 3, 4, and 6 is low due to intrusive modifications and their relatively poor condition, nevertheless they do retain some heritage value in respect of their role in the development of the Outer Harbour and the role Port Kembla has played in coastal trade and import/export of goods. The retention of these items in their present condition would not be of great benefit to the Outer Harbour area as it would prevent development of the area. Removal of the jetties and their replacement with modern structures can be seen as a logical progression in the development of the Outer Harbour, consistent with previous practices of removing outdated wharf structures and upgrading and enhancing port facilities as need and technical ability allows. The historic use of the port as a location of import and export of cargo is not changed, and the development will allow the Outer Harbour to continue to be viable as a working port for years to come.

Items which are listed on the State Heritage Inventory

The historic, research and representative values of the Historical Military Museum and the Breakwater Battery are appreciated by the local community as well forming a local tourist attraction. They are representative of a local coastal defence installation and historically significant as a site of local defence in the Second World War. It is therefore essential that management of these heritage items is conducted in a manner which retains their significance to the local community and the history of the Port Kembla area.

The Mobile Block Setting Steam Crane is locally significant as a tangible reminder of the construction of the Outer Harbour. It is also representative of cranes of this class and make which at one time operated throughout the state. It is also believed to be the last remaining of its type extant in the state. All options for its retention and preservation in a prominent yet historically appropriate location is therefore recommended.

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8.0 Management Recommendations

The following management recommendations are proposed as a result of this report:

Prior to Major Project Approval the following recommendations are suggested:

Recommendation 1

Prior to the demolition of No.3 Jetty, archival photographic recording to record the jetty in its final form should be undertaken. Photographic recording could take place from the water and from the structure itself provided that adequate safety precautions are taken. It would also be pertinent to construct a comprehensive history of the use of the jetty including historical and recent photographs of the structure and its operation to preserve the knowledge of its operations.

Recommendation 2

Prior to the demolition of No.4 Jetty, archival photographic recording to record the jetty in its final form should be undertaken. A photographic archive of the final operating guise of the jetty would provide a complete picture of the lifespan of the jetty. It would also be pertinent to construct a comprehensive history of the use of the jetty including historical and recent photographs of the structure and its operation to preserve the knowledge of its operations .

Recommendation 3

The Mobile Block Setting Steam Crane is a rare and representative example of such mobile cranes at a state level. It is therefore recommended that a Conservation Management Plan be implemented as soon as possible for the ongoing heritage management of the crane to ensure its continued maintenance in a condition befitting this status. As part of the plan a nomination for its inclusion on the State Heritage Register should be produced.

The following recommendations are made in relation to works proposed as part of the Concept Plan.

Recommendation 4

Prior to the demolition of No.6 Jetty, archival photographic recording to record the jetty in its final form should be undertaken. A photographic archive of the final operating guise of the jetty would provide a complete picture of the lifespan of the jetty. It would also be pertinent to construct a comprehensive history of the use of the jetty including historical and recent photographs of the structure and its operation to preserve the knowledge of its operations .

Recommendation 5

As part of the detailed planning for construction of the new port access road, steps to mitigate the heritage impact to the Historical Military Museum site should be taken. Specifically the road should be designed to limit impacts to accessibility between the concrete pillbox and the museum. Landscaping should be considered to ensure that the visual impact is minimised.

Recommendation 6

The Mobile Block Setting Steam Crane will likely be directly affected by construction of the new road. As part of a Conservation Management Plan the temporary or permanent relocation of the crane should be considered. This would ensure that any potential impact to the crane by road construction is minimised. The relocation and interpretation of the crane should occur in a prominent location in the vicinity of its present location.

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9.0 References

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State Records Item Number 12/3648 Record of Work Cards – Newcastle and Port Kembla.

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Figures

Mulgoa
Blue Mountains National Park
Wallacia
Sydney
Narellen
Camden
Campbelltown
Royal National Park
Picton
Appin
Nattai National Park
Buxton
Bargo
Bellambi Point
Wollongong
Mittagong
PROJECT LOCATION
Port Kembla
TASMAN SEA
Bowral
Moss Vale
Minnamurra
MERYLA
Budderoo National Park
Kiama
Kangaroo Valley
Gerringong
Bugong National Park

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LEGEND

- NPWS estate
- State forest
- Highway
- Railway
- Road
- Creek/River

Regional Context

Port Kembla Port Corporation
Preliminary Heritage Assessment
Port Kembla Outer Harbour Development

Figure
F1

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A3 Size

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Coal Loader
Tug Berth
Existing Berth
Northern Breakwater
Outer Harbour
Port Kembla Steelworks
No. 6 (Gateway) Jetty
Eastern Breakwater
TASMAN SEA
No. 4 Jetty (Berth 205)
No. 3 Jetty
FLINDERS STREET
CLIFFLEY DRIVE
FORESHORE ROAD
Orica Port Kembla Site
Historic Military Museum
Breakwater Battery
Mobile Block Setting Steam Crane
Concrete Tank Barriers
Breakwater Battery
Pillbox
Approximate alignment of Access Road

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LEGEND

- Listed Historic Heritage Item Location
- Non Listed Heritage Item Location

Heritage Items Assessed in this Report

Port Kembla Port Corporation
Preliminary Heritage Assessment
Port Kembla Outer Harbour Development

Figure
F2

Map Document: G:\Projects\600\600393 Port Kembla Outer Harbour Development\Heritage\60039301 F2

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Plates

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Plate P1: No.3 Jetty looking north from security gate towards end of Jetty

Plate P2: View north from fence of condemned portion of No.3 Jetty

Plate P3: Area beneath No.4 Jetty showing modified piles and general condition of under deck structure.

Plate P4: Jetty No.6 looking north showing recently added ore concentrate loader.

Plate P5: Gun emplacement of Breakwater Battery, with Concrete Tank Barriers visible in background facing north.

Plate P6: Historical Military Museum structure, image taken facing west

Plate P7: Concrete Pillbox looking south west from disused railway cutting

Plate P8: Mobile Block Setting Steam Crane with dump wagons

Plate P9: Mechanical detail of Mobile Block Setting Steam Crane

Plate P10: Dump wagons associated with Mobile Block Setting Steam Crane

Worldwide Locations

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