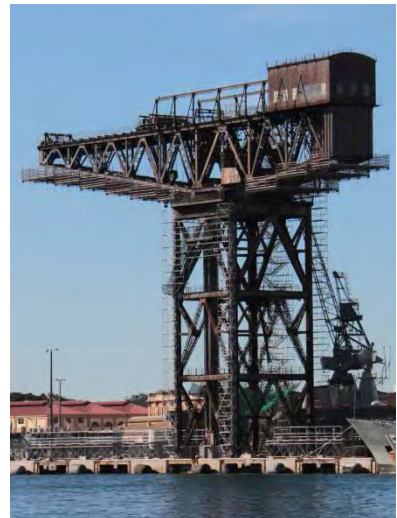


Godden Mackay Logan

Heritage Consultants



Hammerhead Crane, Garden Island, Sydney

Salvage and Re-use Plan

Report prepared for Brookfield Johnson Controls
on behalf of the Department of Defence

January 2014

Godden Mackay Logan Pty Ltd

ABN 60 001 179 362

Sydney

78 George Street Redfern

NSW Australia 2016

T +61 2 9319 4811

Canberra

2A Mugga Way Red Hill

PO Box 3171 Manuka

ACT 2603

T +61 2 6273 7540

www.gml.com.au

Report Register

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Job No.	Issue No.	Notes/Description	Issue Date
13-0279	1	Draft Report for Brookfield Johnson Control review and comment	20 December 2013
13-0279	2	Final Report	8 January 2014

Quality Assurance

GML Heritage Pty Ltd operates under a quality management system which has been certified as complying with the Australian/New Zealand Standard for quality management systems AS/NZS ISO 9001:2008.

The report has been reviewed and approved for issue in accordance with the GML quality assurance policy and procedures.

Project Manager:	Julian Siu	Project Director:	Prof Richard Mackay, AM
Issue No.	2	Issue No.	2
Signature		Signature	
Position:	Consultant	Position:	Partner
Date:	8 January 2014	Date:	8 January 2014

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1.0 Introduction

GML Heritage Pty Ltd (GML) has been commissioned by Brookfield Johnson Controls (BJC) on behalf of the Department of Defence (Defence) to provide heritage services relating to the Hammerhead Crane removal project, including preparation for the Expression of Interest (EOI) process and this Salvage and Re-use Plan.

This report provides information on the components of the Hammerhead Crane that were made available as part of the EOI process. This report outlines the process undertaken for the EOI, includes a copy of each submission received, provides an evaluation of the each submission, and justifies whether the proposal in each submission will be agreed to by Defence. It also briefly discusses the potential conservation and re-use options for those components as proposed in the submission.

For completeness, this report also outlines the high heritage value components of the Hammerhead Crane which were identified as part of a heritage assessment in 2013, which will be salvaged as part of the removal project, and retained, conserved and publicly displayed as part of future interpretation initiatives for the crane.

1.1 Background

In 2012, Defence commissioned Parsons Brinkerhoff and Brookfield Multiplex to prepare an *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) Referral for the removal of the Hammerhead Crane. Defence determined that the proposed removal of the Hammerhead Crane was necessary to allow Garden Island to provide training and logistic support, maintenance facilities and berths for major current and future Royal Australian Navy (RAN) ships home-ported in Sydney, as well as additional berths for other visiting RAN and foreign warships.

On 15 June 2012, Defence submitted the Referral under Section 68 of the EPBC Act for the removal of the Hammerhead Crane at Garden Island, FBE Sydney, New South Wales. On 12 July 2012, the proposed action was determined to be a controlled action by the then Commonwealth Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) and as such was required to be assessed by Preliminary Documentation (EPBC 2012/6430).

On 17 July 2013, Defence received approval from the then Minister of DSEWPaC to remove the Hammerhead Crane located at Fleet Base East, Garden Island, New South Wales (EPBC 2012/6430).

A series of conditions of consent were stipulated within the approval. Regarding the EOI process, consent condition 2 stated that:

2. Prior to the commencement of removal works, the person taking the action must make a targeted call for expressions of interest and / or tender, proposals to accept free of charge or purchase at a reasonable cost any component(s) of the Hammerhead Crane (except the high value components identified by condition 1 of this approval) for conservation purposes, or any use that sensitively commemorates and interprets the heritage values of the Hammerhead Crane. The invitation for expressions of interest and / or tender must target (but need not be limited to) those parties who made submissions during public consultation on the preliminary documentation.

Regarding the Salvage and Re-use Plan, consent condition 3 stated that:

3. Prior to the commencement of removal works, the person taking the action must provide a salvage and reuse plan to the Department which:

- a) sets out and includes a full copy of the submissions received in response to condition 2 of this approval;*
- b) identifies criteria for evaluating the submissions received, including the criteria relating to the heritage values of the Hammerhead Crane;*
- c) provides an evaluation of each submission;*
- d) outlines which components will be made available for conservation and re-use, including how and when these components will be used; and*
- e) clearly states, and provides justification for, whether the proposal(s) have been, or will be, agreed to by the person taking the action.*

The plan must be implemented and be published on the Royal Australian Navy or Department of Defence's website for the duration of removal works.

1.2 Suitably Qualified Expert

GML is a leading provider of advisory and research services in environmental heritage, planning, interpretation and archaeology. GML provides expert services which facilitate the conservation management of all types of heritage. GML has been a member of the Defence Environment and Heritage Panel (DEHP) since 2004.

GML has an extensive knowledge of the Hammerhead Crane, having provided heritage assessments, expert reports, input into the EPBC Act Referral and specialist and strategic heritage advice regarding the crane, and its removal, to Defence since 2000.

GML's project team includes highly experienced heritage consultants with an in-depth knowledge of the Hammerhead Crane and its industrial heritage significance, and interpretation specialists with extensive experience in interpretation planning and implementation.

1.3 Author Identification

This report was prepared by Julian Siu, Consultant, GML. The report has been reviewed and edited by Prof Richard Mackay, AM, Partner of GML.

1.4 Acknowledgements

GML acknowledges the assistance of the following people during the preparation of this report:

- Esti Cogger, Project Manager—Defence, Brookfield Johnson Controls;
- Robert Stapleton, Brookfield Johnson Controls; and
- Raffy Andreoli, Director Business Operations, DS-NSW.

2.0 High Heritage Value Components

The following section identifies the high heritage value components of the Hammerhead Crane which will be salvaged for conservation and/or potential public display/exhibition/interpretation purposes.

Ancillary items which contribute to the historic significance and operations of the Hammerhead Crane have also been identified and assessed as being of moderate heritage significance; however they are not included in this report. They were included in the Tender Technical Specifications (July 2013) and will be included in the Heritage Interpretation Plan which is currently being prepared by GML.

2.1 Identification of High Heritage Value Components

A key aspect of managing heritage values is an understanding of how the heritage values are embodied in and expressed through the fabric of the heritage item/place. With this understanding, conservation strategies, policies and actions can be determined with the aim of managing and interpreting these heritage values.

The following discussion reflects on how heritage values are expressed in the fabric of the Hammerhead Crane and provides context in regards to the selection of high heritage value components.

The selected high heritage value components, along with appropriate interpretation, are sufficient to convey the following themes for the Hammerhead Crane. The use of ancillary items could supplement the interpretation.

“Giant” Characteristics

In considering the Crane's heritage values, a key element that comes through is the size of the Crane. It is after all a “Giant Crane” and, in contrast with other cranes, this is expressed not only by its size but also through its bulk. This unique sense of “giantness” encompasses the ability of the fabric of the Crane to demonstrate key aspects of its heritage values such as its role and association with the Captain Cook Dockyard (Graving Dock) and its aesthetic qualities.

Location

A critical historical element of the Crane is its location as part of the Captain Cook Dockyard and in its own right (as it did lifting apart from Dockyard work). This is why it is difficult to separate the Crane from its location without significantly diminishing its heritage values.

Technology

The Crane is an important example of industrial technology and its fabric demonstrates this.

The Crane is asymmetric but balanced so that the forces are transmitted down through the live ring and roller track; this is the critical technology at the heart of the Crane.

The hoist, hook platform and hook system are important in demonstrating the capacity of the Crane; and the auxiliary hook also assisted in slewing or angling loads so that they could be manoeuvred into confined spaces. The stamp of “William Arrol” on the sheaves of the hook blocks reinforces the

association with Sir William Arrol & Co., the designers of the Crane and a significant engineering firm worldwide – a reflection of the global reach of Scottish engineering.

The Machine House contains a series of electric motors, brakes, cables and cable drums as well as a small travelling bridge crane (used for moving components of the Crane for maintenance purposes).

There are two Slew Houses (North and South) which contain electrical motors used for slewing (traversing) the Crane around the lifting ring by driving on the external rack. Slew House South also contains electrical motors for lifting the hook block.

The Driver's Cabin is important as it was the heart of the Crane's operations. From the Cabin, the driver controlled the slewing of the Crane, the movement of the hook platform along the jib and the raising and lowering of loads. The Cabin was sited to provide maximum visibility for the operator. The fabric of the cabin demonstrates the importance of the skilled operator in keeping the Crane within safe working load limits and in communicating with those outside in the placement of heavy loads. There are several layers of equipment representing different generations of communication technology in the cabin.

2.2 Heritage Assessment 2013

A Heritage Assessment was undertaken, as part of the 2005 Heritage Assessment investigations by GML.

The components of the Hammerhead Crane were reassessed for their heritage significance in April 2013 owing to the lapse in time, changes in fabric condition and with an aim to develop a clearer understanding of the intended future for the Hammerhead Crane. This reassessment was undertaken by Julian Siu and Prof Richard Mackay, AM of GML with industrial expertise provided by Dr Iain Stuart of JCIS Consultants.

The reassessment was undertaken so that significant heritage components of the Hammerhead Crane could be identified, salvaged during the removal process, retained and conserved (as required) and used in future interpretation and/or public display.

In the context of understanding the potential heritage impacts of the removal or alteration of specific components on the overall integrity of the Crane, the relative significance of each of the major components was ranked as being of High, Moderate or Little significance, with comments explaining the nature of their importance.

The highlighted areas on Figure 2.1 identify the locations of specific components recognized to have High heritage significance which are to be salvaged in keeping with the conditions of consent. Ancillary components that could be salvaged; such as jib truss members, arch portals and steel struts, are not identified in this report, as these can be sourced from various locations on the Crane. A representative collection of these ancillary components should be salvaged to allow sculptural interpretation of fabric from the Crane.

As part of the deconstruction project, these components are clearly identified to the demolition contractor and that the methodology and requirements for their removal are carefully considered. Also requiring consideration is the comprehensive labelling, tracking and storage of these components after removal, during the decontamination process and transferral into storage and/or public display.

Table 2.1 Summary list of high heritage value components following reassessment.

Component Name	Heritage Significance Grading
Hoist drum set	High
Hook Platform	High
Hook Blocks	High
Jib Tip Cable Anchorage Frame	High
Slew Motor Houses North and South (2 sets of machinery)	High
Driver's Cabin	High
Slew Ring	High

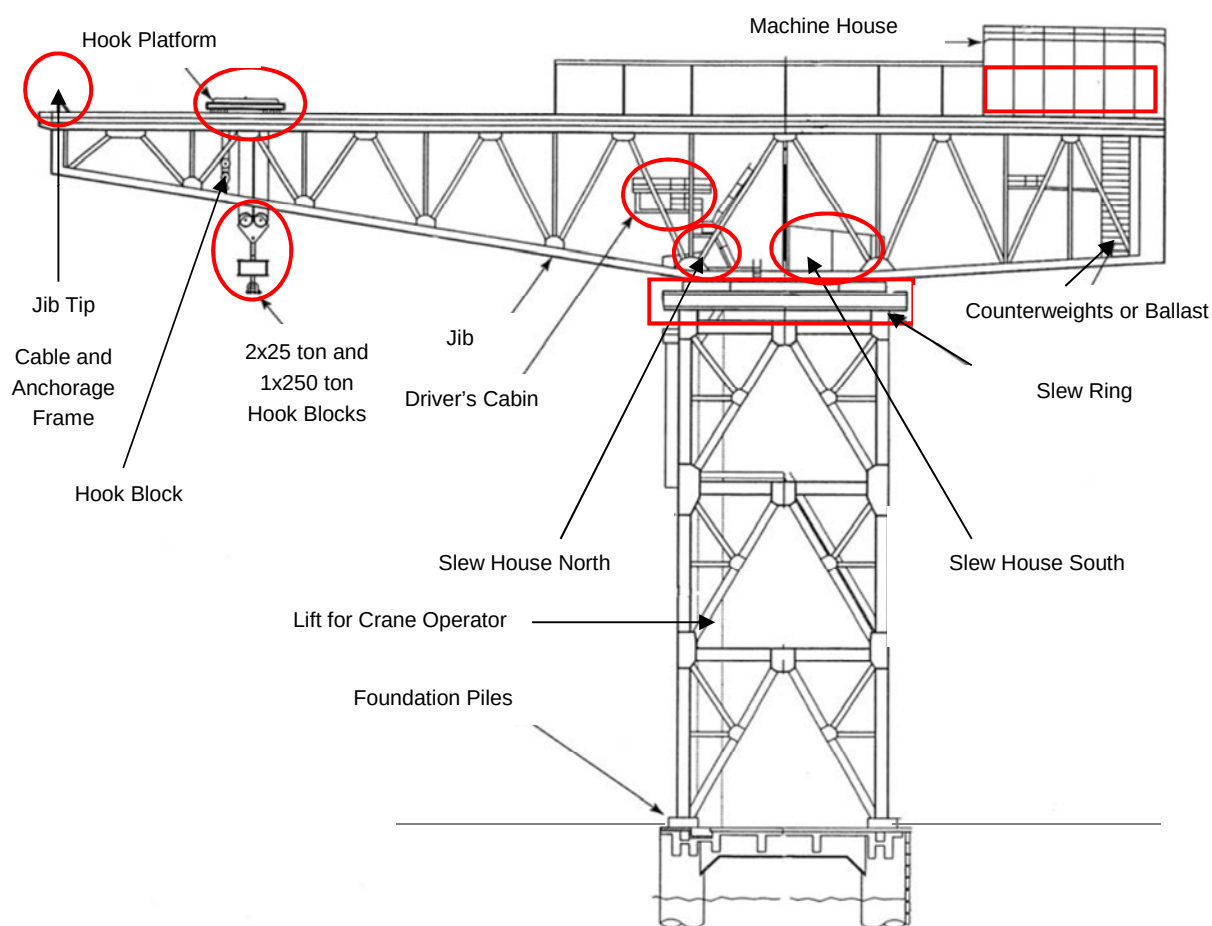
**Figure 2.1** Terminology and location of components on the Hammerhead Crane recommended for salvage. (Source: Graphic from Hammerhead Crane—Heritage Assessment Report, GML, November 2005, p31).

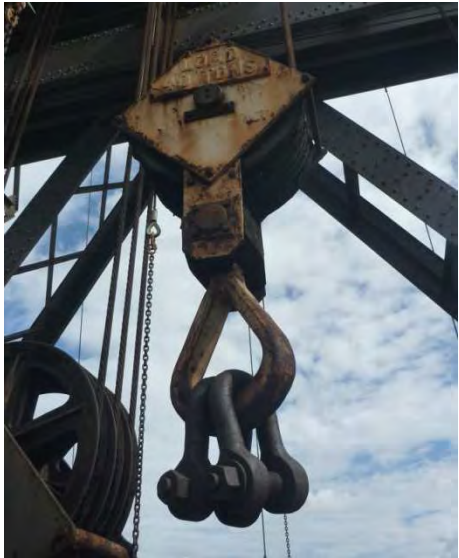
Table 2.2 Table of high heritage value components following reassessment

Component Name	Hoist drum set	
Description	The Machine House contains a series of electric motors, brakes, cables and cable drums as well as a small travelling bridge crane (used for moving components of the crane for maintenance purposes). The first set of cable drums moved the hook platform back and forth along the jib while the other two moved the hook and its load up and down. The main cable drums for the two 125 ton hooks (No.1 and No.2) weigh 18 tons each and are located at the rear of the Machine House. There are brakes attached to all the drums. The winders are remotely controlled from the Drivers Cabin. Each cable drum has its own electric motor, brake, mechanical gears and cable, therefore sets of machinery for each cable drum can be identified. The electrical fit out was designed by British firm Thomson Huston Co., a well-known and important manufacturer of electrical equipment.	Cable drums and cables 
Heritage Significance Grading	High—Original Operating Equipment	Indicative set – cable drum, cable, motor, brakes, gears
Removal Requirements	Salvage and retain (at least) one set of the main winch machinery including the cable drum, cradle, cable, motor, brakes and gears. These components will be used to present and interpret the operations of the Hammerhead Crane. Specific components should be salvaged to ensure comprehensive interpretation of the machinery's operations/function. It is critical that all the machinery in the Machine House is recorded precisely (possibly using the 3D laser scanner) and fully described in situ to ensure that reassembly is possible and accurate and that interpretation has as much information as possible. It is important to salvage the manufacturer's plaques from the machines for use in interpretation. The Machine House sheet metal cladding and steel structure does not embody enough significance to warrant its full retention. Some sheets may be retained for re-use.	Electric motor  Gears and cradle 

Component Name	Hook Platform
Description	The hook platform runs along four tracks attached to the top of the top chords of the jib. The movement of the hook platform along the jib was limited by the trolley stop and the jib head, both of which were provided with dumb buffers. The hook platform facilitated the lifting and moving capability of the crane. It allowed very precise movements of the load.
Heritage Significance Grading	High—Original Operating Equipment
Removal Requirements	These components may be used to present and interpret the operations of the Hammerhead Crane. Specific components should be salvaged to ensure comprehensive interpretation of the machinery's operations/function. It is critical that the machinery is recorded precisely (possibly using the 3D laser scanner) to ensure that reassembly is possible and accurate.



Hook Platform

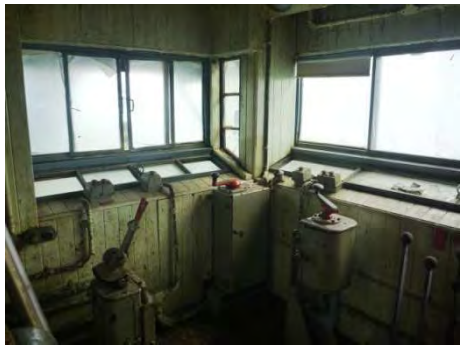
Component Name	Hook Blocks	 Hoists No.1 and No.2 above the 250 ton crosshead  Auxiliary hook  No.1 Hook
Description	The hook consists of the two main blocks which are suspended from the hook platform and are attached to the crosshead or load block of the crane. The hook platform moves along the jib on tracks and the hook lifts and carries the loads. The outside sheaves of No.1 and No.2 blocks are inscribed with 'Sir W Arrol & Co', 'Glasgow 1943', 'max load 125 tons'. This is an important reference to the role of Arrol & Co. in the construction of the crane and to the broader role of Scottish engineering in the industrial development of Australia. Therefore these elements have high interpretive value. The lifting capacity of the hook system is marked on the block sheaves, reinforcing the fact that this is a heavy lifting crane. The auxiliary hook also hangs off the hook platform. It can support a 40 ton load.	
Heritage Significance Grading	High—Original Operating Equipment	
Removal Requirements	May be used to present and interpret the operations of the Hammerhead Crane. Specific components should be salvaged to ensure comprehensive interpretation of the machinery's operations/function. It is critical that the machinery is recorded precisely (possibly using the 3D laser scanner) to ensure that reassembly is possible and accurate. These components can be disconnected from each other and removed separately.	

Component Name	Jib Tip Cable Anchorage Frame
Description	This structure provided the anchor point and return for the cables that allowed the hook platform to move up and down the jib. The jib head was provided with a set of dumb buffers in the form of substantial wooden blocks to prevent the hook platform running off the end of the jib.
Heritage Significance Grading	High -Original Operating Equipment
Removal Requirements	May be used to present and interpret the operations of the Hammerhead Crane. Specific components should be salvaged to ensure comprehensive interpretation of the mechanism's operations/function. It is critical that the machinery is recorded precisely (possibly using the 3D scanner) to ensure that reassembly is possible and accurate. May be removed in sections (unbolted, unscrewed etc.) and catalogued to allow reassembly.



Jib Tip Cable Anchorage Frame

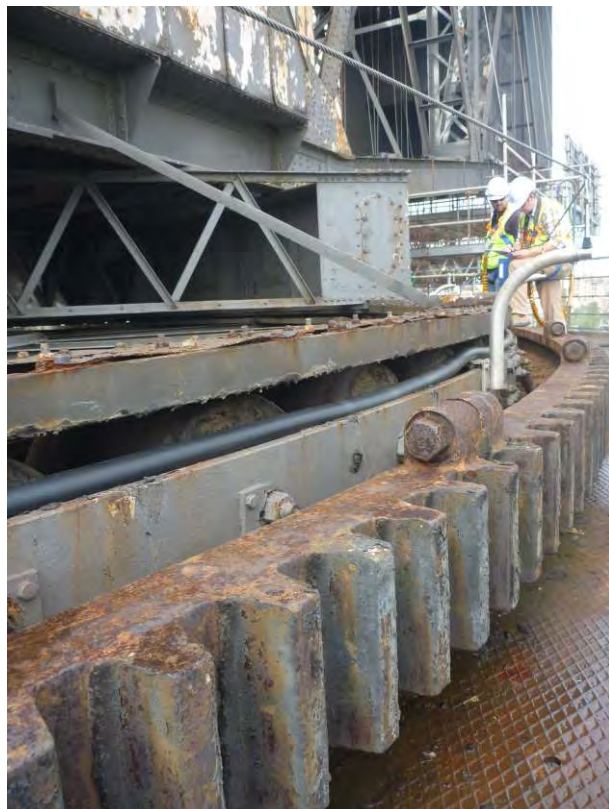
Component Name	Slew Rooms North and South (2 sets of machinery)	 Interior detail featuring slewing drive located in Slew Room North  The crown wheel is connected to the pinion by a vertical shaft.
Description	The Slew Rooms contain electric motors that drove gears articulated with the rack allocated on the outside of the live ring. This allowed the crane to slew or rotate on the tower. There would also have been a device for breaking the slewing motion. The precision of the slewing allowed for heavy loads to be placed with great accuracy. Slew Room South was inaccessible during the inspection. In addition to slewing machinery, Slew Room South contains the machinery for operating the jigger hoist.	
Heritage Significance Grading	High—Original Operating Equipment	
Removal Requirements	May be used to present and interpret the operations of the Hammerhead Crane. Specific components should be salvaged to ensure comprehensive interpretation of the machinery's operations/function. It is critical that the machinery is recorded precisely (possibly using the 3D laser scanner) and fully described in situ to ensure that reassembly is possible and accurate.	

Component Name	Driver's Cabin	
Description	The Driver's Cabin is located within the jib structure of the Crane above the bottom chord and Slew House North. The Driver's Cabin is important as it was the heart of the crane's operations. From the cabin, the driver controlled the slewing of the crane, the movement of the hook platform along the jib and the raising and lowering of the loads. The cabin was sited so as to provide maximum visibility for the operator. The operator had views to the main hoists and hook platform above, and to the ground. The fabric of the cabin demonstrates the importance of the skilled operator in keeping the crane within safe working load limits and in communicating with those outside in the placement of heavy loads. There seems to be several layers of equipment representing different generations of communication technology in the cabin. The walls and floor of the control cabin contain numerous indicators, panels, switches, signs etc. which operated different functions of the crane. The walls are lined with stained timber but have been painted.	Underside of the Driver's Cabin  Interior of the Driver's Cabin  View of some of the indicators in the Driver's Cabin
Heritage Significance Grading	High—Original Operating Equipment	
Removal Requirements	The Driver's Cabin should be removed as a whole. The sunroof can be removed separately. Preferably, the indicators, panels, switches etc. would remain attached to the walls. It is critical that the machinery is recorded precisely (possibly using the 3D laser scanner) and fully described in situ to ensure that reassembly and interpretation is possible and accurate. The Driver's Cabin will be used to present and interpret the operations of the Hammerhead Crane. Specific components must be salvaged to ensure comprehensive interpretation of the Driver's Cabins function. The cabin is particularly suited for a AV based interpretation of the Crane's operation	

Component Name	Slew Ring
Description	The crane is asymmetric but balanced so that the forces are transmitted down through the live ring and roller track. This is the critical technology at the heart of the crane and what makes it different from the German Hammerhead Crane. The Slew Ring allowed the jib to rotate on the tower. Ninety-six 16inch (41cm) diameter solid steel rollers fit together to make the Slew Ring. There is also a large steel pin capable of taking the weight of the crane if the roller track fails in some way. Components also include the gear rack located on the outside of the Slew Ring (which is engaged by the slew motors above).
Heritage Significance Grading	High—Original Operating Equipment. This is the most significant component of the crane.
Removal Requirements	Salvage a segment (approximately 1/6 of the live ring) of the Slew Ring including the spur wheel, rollers, trusses, spokes, cradles and the centre pin. May be used to present and interpret the operations of the Hammerhead Crane. Specific components should be salvaged to ensure comprehensive interpretation of the machinery's operations/function, however identical elements in other segments of the Slew Ring may be substituted for salvage depending on accessibility and the sequence of removal. It is critical that the machinery is recorded precisely (possibly using the 3D laser scanner) and fully described in situ to ensure that reassembly is possible and accurate.



Slew Ring – central pin



Slew Ring - cogs

3.0 Expression of Interest Components

Aside from the high heritage value components of the Hammerhead Crane (as identified in Section 2.0), other components of the crane were identified for the purpose of making available to interested stakeholders as part of the EOI process to comply with consent condition 2.

The following section details the criteria used to identify which components were made available as part of the EOI process, and how such information was communicated to the interested stakeholders.

3.1 Available Components

The criteria used to determine which components were to be made available as part of the EOI process included considerations of:

- Heritage Significance
 - Component could not be of high heritage value already identified for other salvage during the removal and for future conservation and interpretation purposes;
 - Component could be an “excess component” with High heritage values; and
 - Component should have some specific attributes which contribute to the Crane’s heritage value.
- Aesthetics
 - Components should typify the crane’s aesthetic characteristics and be recognisable as pieces from a large industrial structure, such as the jib and tower truss members.
- Rarity
 - Components could not be items which are ‘one offs’. For example, ancillary items from the Machine room such as the large spanners and telephone; and
 - Components should be numerous to allow multiple interested stakeholders to obtain the same/similar pieces.
- Logistics and Future Display
 - Components should be of a variety of sizes and weights to cater for different stakeholders’ transport and display capabilities—possibly divided into categories such as small, medium, large and extra-large.
- Remediation, Storage and Maintenance Requirements
 - Components should be efficiently, effectively and economically decontaminated;
 - Components should be of a size and nature which can allow storage of the pieces for up to five years; and
 - Components should be easy to maintain until collected by the interested stakeholder.

The decision about which components were made available as part of the EOI process was agreed between BJC, Defence and GML.

3.2 Selected Components

The components which were made available as part of the EOI process for conservation and re-use are listed below. Information about how and when these components will be used was sought from the interested parties as part of an EOI process (this partially satisfies consent condition 3d).



Figure 3.1 Indication of where components A, B, C and D would be sourced from the Hammerhead Crane. (Source: GML 2013)

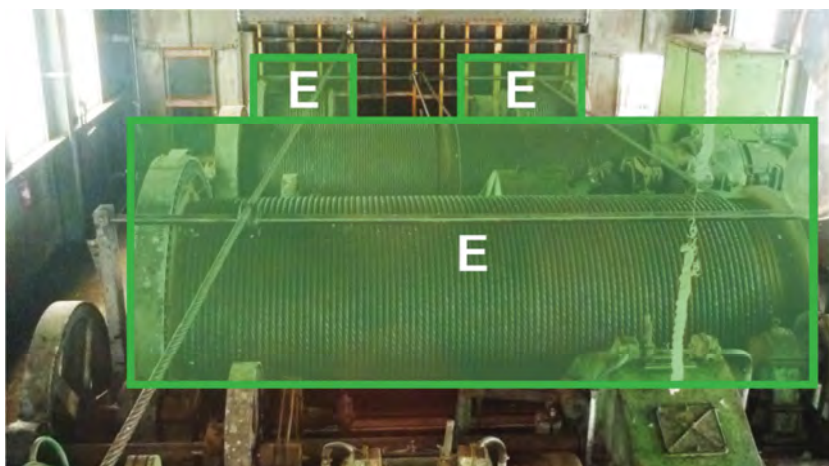


Figure 3.2 Indication of where component E (multiple pieces) would be sourced from within the Machine Room of the Hammerhead Crane. (Source: GML 2013)

Type A:	Riveted steel truss from the jib	
Sizing:	Various lengths (min. 2.0m long and 0.5m deep) and configurations with connections.	
Description:	Comprising a majority of the Hammerhead Crane and lending it an iconic industrial character are the steel structural members which form the tower supports and jib. This component includes the splay of (rectangular) truss members of the jib and the steel connector plates/sections.	
Type B:	Section of riveted steel plate from the jib with rivet heads	
Sizing:	Up to 300mm in height and up to 200mm in width	
Description:	The jib is an asymmetrical, horizontal steel truss constructed with riveted plate and lattice steel girders.	
Type C:	Slew Ring segment	
Sizing:	1.0m curved segments plus associated solid steel rollers	
Description:	The crane is asymmetric but balanced, so that the forces are transmitted down through the Slew Ring and roller track. This makes the Slew Ring the critical technology at the heart of the Hammerhead Crane. The Slew Ring allowed the jib to rotate on the tower. Ninety-six 16inch (41cm) diameter solid steel rollers fit together to make the Slew Ring.	

Type D:	Riveted steel truss from the tower
Sizing:	Various lengths (min. 2.0m long and 0.4 deep) and configurations with connections
Description:	Comprising a majority of the Hammerhead Crane and lending it an iconic industrial character are the steel structural members which form the tower supports and jib. This component includes the diagonal (square) truss bracing members of the towers legs and the steel connector plates/sections.



Type E:	Cable drums and steel cable
Sizing:	Small: 1.5m long, 1.0m diameter Large: 4.0m long, 1.5m diameter
Description:	The two smaller cable drums were used to move the Hook Platform back and forth along the jib. The larger cable drums were used to raise and lower the hook and its load. Each cable drum has its own electric motor, brake, mechanical gears, brakes and cable. However, only the cable drum and its steel cable are being offered.



3.3 Documentation

An EOI catalogue was prepared by GML in collaboration with BJC, and approved by Defence. The catalogue provided information on the progress of the Hammerhead Crane removal project and how high heritage value components had already been identified and would potentially be used for future interpretation purposes.

The catalogue provided stakeholders with information about the components made available as part of the EOI, the process and stipulated caveats for receiving the components.

An A4 version of the EOI catalogue was emailed to interested stakeholders. Where the email address was not available, a hard copy of the EOI catalogue was posted to the interested stakeholders. A copy of the EOI catalogue and the accompanying cover letter are included as Appendix A of this report.

In total, 80 EOI information packs (EOI catalogue and cover letter) were either emailed or posted to interested stakeholders (individuals and organisations).

4.0 Expression of Interest Process

4.1 Commencement and Conclusion

The EOI period commenced on Thursday 24 October 2013 and occurred over 20 business days. The EOI period concluded on Wednesday 20 November 2013 at 5.00pm AEDT.

4.2 Interested Stakeholders

Persons identified as interested stakeholders in relation to the Hammerhead Crane were identified through a variety of mechanisms including:

- Respondents to the public consultation process for the Hammerhead Crane which occurred between 21 January and 18 February 2013;
- Respondents to the public exhibition process for the Hammerhead Crane which occurred between 13 May and 7 June 2013;
- Stakeholders consulted as part of the Heritage Assessment report prepared by GML in 2005; and
- Other general enquiries before and after commencement of the EOI process.

A full list of EOI interested stakeholders (individuals and organisations) has been provided to Defence. Owing to privacy reasons, the names of the 60 individual interested stakeholders have been withheld. The list of contacted organisations is provided in the following table.

4.2.1 Organisations

Name	Sent Date	
	Email	Postal
National Trust of Australia (NSW)		25/10/13
Office of Environment and Heritage	24/10/13	
Australian Heritage Council		25/10/13
Institution of Engineers Australia (NSW Chapter)	24/10/13	
Association of Professional Engineers, Scientists & Managers, Australia	24/10/13	
The Powerhouse Museum		25/10/13
Sydney Harbour Foreshore Authority	24/10/13	
Commonwealth Department of Infrastructure and Regional Development	24/10/13	
Commonwealth Department of Industry	24/10/13	
NSW Roads and Maritime Services		25/10/13
NSW Trade and Investment	24/10/13	
Sydney City Council	24/10/13	
Boating Industry Association of NSW Ltd	24/10/13	
Australian Industry Group		25/10/13

Name	Sent Date	
	Email	Postal
Australian Steel Institute	24/10/13	
Australian Federation of International Forwarders	24/10/13	
Australian Shipowners Association		25/10/13
NSW State Chamber of Commerce		25/10/13
Maritime Union of Australia	24/10/13	
CFMEU NSW Branch		25/10/13

5.0 Submissions

5.1 Receipt

The EOI process allowed submissions to be received via email (to a dedicated email address hammerhead.inquiries@anz.brookfieldJCI.com) and post (to Brookfield NSW Tender Committee (for BJC), Expressions of Interest Project S6061, Level 22, 135 King Street, Sydney NSW 2000).

A total of five submissions were received before the conclusion date and time for the EOI process.

A summary of the number and method(s) of submission received is contained in the following table.

	Email Submissions	Postal Submissions
Individuals	5	0
Organisations	0	0

5.1.1 Tabulation of Submissions

The unique identifying information for each submission, in the order they were received, is included in the following table.

Owing to privacy reasons, in this report, the submissions are identified by Applicant number (1, 2, 3, 4 and 5), rather than names.

Applicant #	Date	Timestamp	Type of Submission	Component Requested	Individual / Organisation
1	1 November	11.00 AM	Email	Refer to submission (all the components of the crane)	Individual
2	7 November	1.53 PM	Email	Type B	Individual
3	13 November	12.52 PM	Email	Type B	Individual
4	17 November	9.01 PM	Email	Type B	Individual
5	20 November	2.18 PM	Email	Type B	Individual

A full copy of each submission (with personal information omitted for privacy reasons) is included in Appendix B of this report (to satisfy consent condition 3a).

6.0 Evaluation

6.1 Evaluation Criteria

The criteria used to evaluate the submissions were formulated between Defence, BJC and GML. The criteria are set out below (to satisfy consent condition 3b).

Criteria	Related question on EOI response form
a) Availability of the requested catalogue component;	2. Preference for component type (A, B, C, D or E)
b) The applicant's reasons for requesting components; and	3. Why are you requesting this/these specific component(s)? 4. What, if any, connection with the Hammerhead Crane at Garden Island, Sydney, do you have?
c) The designated future use/location of the component.	5. What do you plan to do with the component(s)? (Where will it be located? How will it be displayed? How will it be commemorated?)

6.2 Evaluation of Submissions

An evaluation committee consisting of representatives from BJC, GML and Defence was convened on Wednesday 3 December 2013 at Defence Plaza, Sydney to assess the suitability and acceptability of each submission. Attendees were:

- Raffaella Andreoli—Defence (Defence observer)
- Julian Siu—GML Heritage Pty Ltd (GML representative)
- Robert Stapleton—Brookfield Johnson Controls (BJC representative)
- Esti Cogger—Brookfield Johnson Controls (Chairperson and BJC representative)

The evaluation of each submission (with personal information omitted for privacy reasons) (to satisfy consent condition 3c) is provided below.

Tenderer
Name

Applicant 1

Weight

100%

Adjusted Score

46.0%

Question no.	2	3	4	5		Total
%	0	30	30	40		
Member						
EC	N/A	1	1	3		
RS	N/A	1	1	2.5		
JS	N/A	2	2.5	5		
Agreed Score		1.5	1.5	3.5		
	0.0%	9.0%	9.0%	28.0%		46.0%

Comments

2. Note the preference for a component type

Type A, B, C, D and E, as well as most jib and tower components which were not listed as part of the EOI.

3. The applicant's reason for requesting that component

The applicant proposes to erect a Navy memorial at the Domain and use most parts of the jibs and tower. The applicant has not specifically requested the components on offer and there is no evidence of approval for the memorial, as highlighted under item 6.3 of the concept design. Presently the proposal does not have backing from Defence, City of Sydney Council or any other relevant authority, nor does it have funding.

4. The applicant's connection with the Hammerhead Crane

The applicant is a local resident of Paddington, and is the architect behind the Australian Navy Memorial proposal.

5. How the component will be commemorated in its possession in the short and long term. (Including details on the location that it will be kept/ displayed.

The location in The Royal Botanic Gardens, Sydney - Domain Yurong Precinct - is a fitting location as the site is directly opposite the HHC site, with views to Garden Island. Using pieces of the crane in the building's construction allows the public to get a sense of the scale of the crane, in particular the jib. Interpretation will be provided inside the new building and simply by being amongst it all.

Conclusion: The proposal by this applicant cannot be accepted by Defence.

Tenderer
Name

Applicant 2

Weight

100%

Adjusted Score

69.0%

Question no.	2	3	4	5		Total
%	0	30	30	40		
Member						
EC	N/A	3.5	3.5	2.5		
RS	N/A	3.5	3.5	3		
JS	N/A	5	5	5		
Agreed Score		3.5	4	3		
	0.0%	21.0%	24.0%	24.0%		69.0%

Comments**2. Note the preference for a component type**

2 x Type B

3. The applicant's reason for requesting that component

Request is based on personal reasons. The applicant's grandfather owned the steel company which supplied the steel for the construction of the HHC. This is a sentimental reason. The applicant wishes to utilise the requested components along with photographic records that Sydney Steel obtained during the Construction, and combine the two in a display.

4. The applicant's connection with the Hammerhead Crane

The applicant's grandfather owned the steel company which supplied the steel for the construction of the HHC. This is a sentimental reason. The applicant provided evidence of family members being part of the construction of the HHC.

5. How the component will be commemorated in its possession in the short and long term. (Including details on the location that it will be kept/ displayed.

The applicant will be liaising with Marrickville Council and the Powerhouse Museum to commemorate the HHC. The applicant proposes to utilise the HHC Components in a display with the Power House Museum and the Marrickville local council, (The local council for Sydney Steel, which is where components of the HHC were manufactured)

Conclusion: The proposal by this applicant can be accepted by Defence.

Tenderer
Name

Applicant 3

Weight

100%

Adjusted Score

69.0%

Question no.	2	3	4	5		Total
%	0	30	30	40		
Member						
EC	N/A	3.5	3.5	2.5		
RS	N/A	3.5	3.5	2		
JS	N/A	4	5	4		
Agreed Score		3.5	4	3		
	0.0%	21.0%	24.0%	24.0%		69.0%

Comments

2. Note the preference for a component type

Rivet or metal label. Determined by panel to be Type B.

3. The applicant's reason for requesting that component

Request is based on personal reasons. The applicant's father worked on the construction of the Hammerhead Crane.

4. The applicant's connection with the Hammerhead Crane

The applicant's father (Lt Col. Ronald A.J. Thompson, OBE) was the Technical Director of the Commonwealth Department of Works (NSW Div.) who were responsible for the construction of the crane.

5. How the component will be commemorated in its possession in the short and long term. (Including details on the location that it will be kept/ displayed.

The component will be retained by the family as a keepsake and will not be intended for public display.

Conclusion: The proposal by this applicant can be accepted by Defence.

Tenderer
Name

Applicant 4

Weight

100%

Adjusted Score

69.0%

Question no.	2	3	4	5		Total
%	0	30	30	40		
Member						
EC	N/A	3.5	3.5	3.5		
RS	N/A	3.5	3.5	2		
JS	N/A	3	5	5		
Agreed Score		3.5	4	3		
	0.0%	21.0%	24.0%	24.0%		69.0%

Comments

2. Note the preference for a component type

1 x Type B

3. The applicant's reason for requesting that component

Request is based on personal reasons. A strong family interest, requesting to have a memento for his family.

4. The applicant's connection with the Hammerhead Crane

The applicant's father was Technical Director of the Commonwealth Department of Works and was heavily involved in the construction of the HHC.

5. How the component will be commemorated in its possession in the short and long term. (Including details on the location that it will be kept/ displayed.

The applicant's intent is to have this component displayed in his home, and records placed in the family archive. The item will not be placed on public display.

Conclusion: The proposal by this applicant can be accepted by Defence.

Tenderer
Name

Applicant 5

Weight

100%

Adjusted Score

69.0%

Question no.	2	3	4	5		Total
%	0	30	30	40		
Member						
EC	N/A	3.5	4	3		
RS	N/A	3.5	3.5	2		
JS	N/A	5	5	4		
Agreed Score		3.5	4	3		
	0.0%	21.0%	24.0%	24.0%		69.0%

Comments

2. Note the preference for a component type

3 x Type B

3. The applicant's reason for requesting that component

Request is based on personal reasons. The applicant's father, Errol Noble, designed and was the structural engineer for the HHC. The applicant is requesting a personal memento for each of Errol Noble's children.

4. The applicant's connection with the Hammerhead Crane

This is a very personal family connection. The applicant is requesting a component because of family involvement in the design and construction of the HHC.

5. How the component will be commemorated in its possession in the short and long term. (Including details on the location that it will be kept/ displayed.)

The requested components will be treated with sensitivity and shall be utilised for personal commemorations to their father and his work. They will not be used for public display.

Conclusion: The proposal by this applicant can be accepted by Defence.

6.3 Justification

Justification for whether the proposal has been, or will be, agreed to by the person taking the action (Defence) (to satisfy consent condition 3e) is provided below.

Applicant #	Justification
Applicant 1	The applicant failed to suitably address a number of key areas relating to the EOI criteria. The applicant requested components that were not offered as part of the EOI and did not demonstrate a strong connection with the Hammerhead Crane. The applicant proposed to erect a Navy memorial at the Domain utilising majority of the crane components such as the jib and tower. The proposal would sensitively commemorate the Hammerhead crane, however fails to demonstrate or confirm official backing and funding from Defence, the City of Sydney Council or any other relevant authority. The supply of the requested components which make up most of the crane, would entail extensive decontamination, a significant change to the deconstruction methodology, and an increase to the overall cost for deconstruction. It was also noted that in clause 6.3 of the submission, the applicant "reserves the right to withdraw his request", placing Defence at significant risk if their overall proposal does not obtain funding or approval. Overall this submission does not comply with the requirements of the EOI and the Board does not recommend supplying components of the crane to this applicant.
Applicant 2	The applicant has requested 2 type B components. The applicant's reason for requesting the component is based on a strong family connection to the HHC, which the applicant has subsequently demonstrated in their submission. The applicant proposes to implement the HHC Components in a display, in conjunction with the Power House Museum and the Marrickville local council, which would sensitively commemorate the heritage values of the HHC. Overall, the applicant's submission meets the agreed EOI criteria and the Board recommends the requested Component be provided to this applicant.
Applicant 3	The applicant has requested 1 type B component. The applicant's reason for requesting the component is based on a strong family connection to the HHC, which the applicant has subsequently demonstrated in their submission. The applicant's intent is to have this component displayed in their home. Overall, this applicant's submission meets the agreed EOI criteria and the Board recommends the requested Component be provided to this applicant.
Applicant 4	The applicant has requested 1 type B component. The applicant's reason for requesting the component is based on a strong family connection to the HHC, which the applicant has subsequently demonstrated in their submission. The applicant's intent is to have this component displayed in their home and records placed in their family archive which would sensitively commemorate the HHC heritage values. Overall, this applicant's submission meets the agreed EOI criteria and the Board recommends the requested Component be provided to this applicant.
Applicant 5	The applicant has requested 3 type B components. The applicant's reason for requesting the components are based on a strong family connection to the HHC, which the applicant has subsequently demonstrated throughout their submission. The applicant proposes to utilise the requested components for personal commemorations. Overall, this applicant's submission meets the agreed EOI criteria and the Board recommends the requested Components be provided to this applicant.

6.4 Conclusion

Defence is pleased to be able to meet the desires of all but one applicant.

It was determined that the following applicants be provided with their requested component(s) of the Hammerhead Crane (Type B – Section of riveted steel plate from the jib with rivet heads), for the purpose of commemorating and interpreting the heritage values of the Hammerhead Crane:

- Applicant 2 – Two Type B components;
- Applicant 3 – One Type B component;
- Applicant 4 – One Type B component; and
- Applicant 5 – Three Type B components.

The EOI applicants were notified of this decision via a letter prepared by BJC. A copy of these letters (personal information omitted for privacy reasons) is included as Appendix C.

The letter detailed the component they will receive, the quantity and the process before receipt (such as salvage, decontamination, mounting and framing) of the component.

Applicants who stated that they had resources relating to the Hammerhead Crane (photographs, drawings etc) were asked if their resources could be sighted and potentially included in the Heritage Interpretation Plan currently in preparation.

Applicants who identified as having a personal and relevant connection with the crane (for example a family member being involved in the Hammerhead Crane's design, construction or operation) were invited to participate in the current oral history recording program. The recordings would contribute to the compendium of resources in the Heritage Interpretation Plan and may be used in future interpretation initiatives.

7.0 Conclusion

7.1 Potential Conservation and Re-use Options

A discussion of the potential conservation and re-use options for high (and other) heritage value components of the Hammerhead Crane is provided below, in response to consent condition 3(d).

Preliminary potential options include:

- Inclusion within future interpretative displays as part of:
 - permanent (or temporary) exhibition at various locations, including the Royal Australian Navy Heritage Centre at Garden Island, the Powerhouse Museum, Sydney, the Australian National Maritime Museum, Darling Harbour.
 - museum pieces in conjunction with interpretative information at various locations, including the Powerhouse Museum, Sydney and the Australian National Maritime Museum, Darling Harbour.
- Provision of components of the HHC, as part of the EOI process to interested stakeholders and organisations wanting a piece of the crane in order to sensitively commemorate and interpret the heritage values of the Hammerhead Crane.
- Utilising the components and other metal in an interpretive harbourside artwork/sculpture.

The current process is focused on the identification appropriate re-use options for the salvaged components. They will be subject to Defence and concerned stakeholder agreement, and approval from the Minister of the Department of Environment (DoE).

The options are being detailed in a Heritage Interpretation Plan (HIP) which is currently in preparation. The HIP will be subject to a public consultation process, following which; it will be submitted to the Minister for approval.

The preferred and approved conservation and re-use options will undergo a process of consultation (with Defence and concerned stakeholders), design development and interpretation.

A caveat on all these re-use options is the ability for the component(s) to be appropriately decontaminated to remove all lead paint (and other contamination) and ensure it is not a hazard to health and safe for public display.

8.0 Appendices

Appendix A

EOI Catalogue and Cover Letter

Appendix B

Full Copy of EOI Submissions

Appendix C

EOI Confirmation Letters

Appendix A

EOI Catalogue and Cover Letter

24 October 2013

Our Ref: S6061-EOI

Re: Hammerhead Crane Removal Project from Fleet Base East at Garden Island Naval Base (EPBC 2012/6430)—Expression of Interest

Dear Interested Stakeholder,

You have received this communication because you have been identified as an interested stakeholder in relation to the Removal of the Hammerhead Crane Project.

Stakeholders were identified through a variety of mechanisms including respondents to the Public Consultation process (21 January – 18 February 2013), the stakeholders consulted as part of the 2005 'Hammerhead Crane—Heritage Assessment report' and general enquiries.

Background

On 17 July 2013, the Department of Defence (Defence) received approval from the Minister of the Department of Sustainability, Environment, Water, Populations and Communities (DSEWPaC) to remove the Hammerhead Crane located at Fleet Base East, Garden Island, New South Wales.

A series of Conditions of Consent were stipulated with the approval, including Condition 2, which stated that:

Prior to the commencement of removal works, the person taking the action must make a targeted call for expressions of interest and/or tender, proposals to accept free of charge or purchase at a reasonable cost any component(s) of the Hammerhead Crane (except the high value components identified by condition 1 of this approval) for conservation purposes, or any use that sensitively commemorates and interprets the heritage values of the Hammerhead Crane.

As part of the heritage mitigation measures for the Hammerhead Crane removal project, the heritage consultants, Godden Mackay Logan Pty Ltd, have identified and assigned gradings of heritage significance to different components of the crane. As per the DSEWPaC Conditions of Consent, components of high heritage significance are required to be retained by Defence and will be salvaged during the removal, conserved and utilised in future interpretation initiatives for the Hammerhead Crane.

Expression of Interest

Brookfield Johnson Controls (BJC) has been engaged by Defence to undertake this Expression of Interest (EOI) process.

This EOI process gives you an opportunity to express an interest to receive a component of the Hammerhead Crane for the purpose of sensitively commemorating and interpreting the heritage values of the Hammerhead Crane. If you would like to express an interest:

1. Review the attached EOI brochure;
2. Complete the attached EOI Application Form; and
3. Return it to either:
 - a. hammerhead.inquiries@anz.brookfieldJCI.com; or
 - b. *Brookfield NSW Tender Committee (for BJC)*
Expressions of Interest Project S6061
Level 22, 135 King Street
Sydney NSW 2000

Applications are to be submitted via email or post, and are to be received **no later than 5.00pm AEDT on Wednesday 20 November 2013.**

Each application will be assessed using the stipulated criteria by a panel. Only successful applicants will be notified.

NOTE: the timing for the removal of the Hammerhead Crane and delivery of components is subject to change.

Any inquiries with respect to this EOI should be directed to:

hammerhead.inquiries@anz.brookfieldJCI.com

Yours sincerely

Brookfield Johnson Controls



Ms Esti Cogger

Project Manager- Defence

Attachments:

- Hammerhead Crane Removal Project
 - Expression of Interest Brochure
 - Expression of Interest Application Form



Australian Government
Department of Defence

HAMMERHEAD CRANE Removal Project

EPBC 2012/6430

Background to the Hammerhead Crane Removal Project

In 2012, the Department of Defence (Defence) submitted a referral under Section 68 of the *Environmental Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) for the proposed removal of the Hammerhead Crane from Fleet Base East at Garden Island.

Defence determined that the proposed removal of the Hammerhead Crane was necessary to allow Garden Island to provide training and logistic support, maintenance facilities and berths for major current and future Royal Australian Navy (RAN) ships home-ported in Sydney, as well as additional berths for other visiting RAN and foreign warships.

On 17 July 2013, the Department of Defence received approval from the then Minister of the Department of Sustainability, Environment, Water, Populations and Communities (DSEWPac) to remove the Hammerhead Crane located at Fleet Base East, Garden Island, New South Wales (EPBC Act Referral 2012/6430).

A series of conditions of consent were stipulated with the approval.

Condition 2 stated that:

2. Prior to the commencement of removal works, the person taking the action must make a targeted call for expressions of interest and/or tender, proposals to accept free of charge or purchase at a reasonable cost any component(s) of the Hammerhead Crane (except the high value components identified by condition 1 of this approval) for conservation purposes, or any use that sensitively commemorates and interprets the heritage values of the Hammerhead Crane.

You have received this communication because you have been identified as an interested stakeholder in relation to the Hammerhead Crane. We have identified stakeholders through a variety of mechanisms including respondents to the public consultation process, the stakeholders consulted as part of the 2005 Heritage Assessment report and general enquiries. This gives you an opportunity to express an interest to receive a component of the Hammerhead Crane **for the purpose of sensitively commemorating and interpreting the heritage values of the Hammerhead Crane.**

The following is a summary of the statement of identified Commonwealth Heritage values from the Heritage Assessment of the Hammerhead Crane prepared by the nominated heritage consultants in November 2005:

The Hammerhead Crane is important to Australian history as part of the Captain Cook Dockyard at Garden Island. The facility, planned from 1938 in direct expectation of the war in the Pacific, was a strategic facility designed to maintain and repair capital ships and allowed a major fleet to be based in Sydney Harbour. The construction of the dockyard was a major wartime project and the Hammerhead Crane was the final major component of that development.

The Hammerhead Crane in itself has heritage values as a specialist item of equipment constructed to allow the removal of heavy items of equipment from capital ships of the early twentieth century. Its size and design made it a rare item in the Australian context, yet it was representative of major dockyard cranes across the world, especially those designed by Sir William Arrol and Sons.



HAMMERHEAD CRANE

Removal Project

High Heritage Value Components of the Hammerhead Crane

A key aspect of managing heritage values is an understanding of how the heritage values are embodied in and expressed through the fabric of the heritage item/place.

The following is a discussion on how the heritage values are expressed in the fabric of the Hammerhead Crane.

'Giantness'

In considering the Crane's heritage values, a key element that comes through is the size of the Crane. It is after all a "Giant Crane" and, in contrast with other cranes, this is expressed not only by its size but also because of its bulk. This unique sense of "giantness" encompasses the ability of the fabric of the Crane to demonstrate key aspects of its heritage values such as its role and association with the Captain Cook Dockyard and its aesthetic qualities.

Therefore, any management and interpretation needs to be aimed at expressing the height and width of the Crane and the bulk of its structure.

Technology

The Crane is an interesting example of industrial technology and its fabric demonstrates this.

The Crane is asymmetric but balanced so that the forces are transmitted down through the live ring and roller track; this is the critical technology at the heart of the Crane.

The hoist, hook platform and hook system are important in demonstrating the capacity of the Crane; and the auxiliary hook also assisted in slewing or angling loads so that they could be manoeuvred into confined spaces. The stamp of "William Arrol" on the sheaves of the hook blocks reinforces the association with Sir William Arrol & Co., the designers of the Crane and a

significant engineering firm worldwide – and part of the global reach of Scottish engineering.

The Machine House contains a series of electric motors, brakes, cables and cable drums as well as a small travelling bridge crane (used for moving components of the Crane for maintenance purposes).

There are two Slew Houses which contain electrical motors used for slewing (traversing) the Crane around the lifting ring by driving on the external rack. Slew House south also contains electrical motors for lifting the hook block.

The Driver's Cabin is important as it was the heart of how the Crane worked. From the Cabin, the driver controlled the slewing of the Crane, the movement of the hook platform along the jib and the raising and lowering of loads. The Cabin was sited so as to provide maximum visibility for the operator. The fabric of the cabin demonstrates the importance of the skilled operator in keeping the Crane within safe working load limits and in communicating with those outside in the placement of heavy loads. There are several layers of equipment representing different generations of communication technology in the cabin.

As part of the heritage mitigation measures for the Hammerhead Crane removal project, the heritage consultants have identified and assigned gradings of heritage significance to different components of the crane. As per the DSEWPaC Conditions of Consent, components of high heritage significance are required to be retained by Defence and will be salvaged during the removal, conserved and utilised in future interpretation initiatives for the Hammerhead Crane.



Hoist Drum Set (Source: GML)



Jib Tip Cable Anchorage Frame
(Source: GML)



Slew Ring (Source: GML)

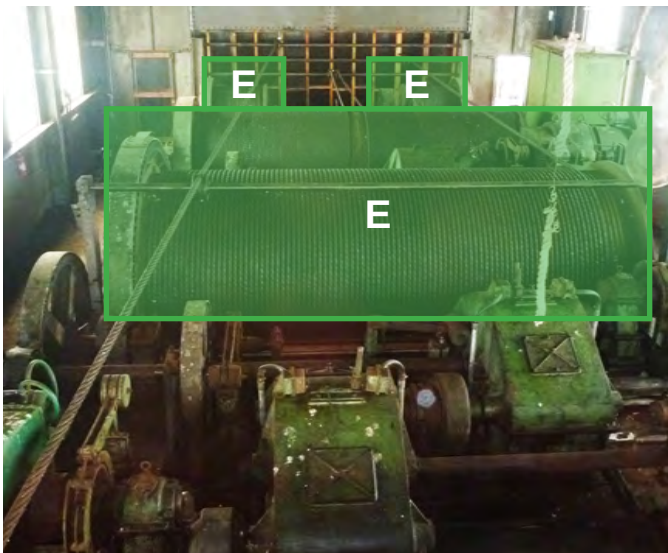


Driver's Cabin
(Source: GML)



No.1 Hook (Source: GML)

Components Available for Expressions of Interest



TYPE A: Riveted steel truss from the jib

Various lengths (min. 2m and 0.5m deep) and configurations with connections

Making up a majority of the Hammerhead Crane and being iconic for its industrial character, is the steel structural members which form the tower supports and jib.

This component includes the splay of (rectangular) truss members of the jib and the steel connector plates/sections.



TYPE B: Section of riveted steel plate from the jib with rivet heads.

Up to 300mm in height and up to 200mm in width

The jib is an asymmetrical horizontal steel truss constructed with riveted plate and lattice steel girders.



TYPE C: Slew ring segment

1m curved segments plus associated solid steel rollers

The crane is asymmetric but balanced, so that the forces are transmitted down through the slew ring and roller track. This makes the slew ring critical technology at the heart of the Hammerhead Crane.

The slew ring allowed the jib to rotate on the tower. Ninety-six 16in (41cm) diameter solid steel rollers fit together to make the slew ring.



TYPE D: Riveted steel truss from the tower legs

Various lengths (min. 2m and 0.4 deep) and configurations with connections.

Making up a majority of the Hammerhead Crane and being iconic for its industrial character, is the steel structural members which form the tower supports and jib.

This component includes the diagonal (square) truss bracing members of the towers legs and the steel connector plates/sections.



TYPE E: Cable drums and steel cable

**Sm: 1.5m long, 1m diameter
Lg: 4m long, 1.5m diameter**

The two smaller cable drums were used to move the hook platform back and forth along the jib. The larger cable drums were used to raise and lower the hook and its load.

Each cable drum has its own electric motor, brake, mechanical gears, brakes and cable. However, only the cable drum and its steel cable is being offered.





Australian Government
Department of Defence

October/November 2013

Calls for Expressions of Interest

Open: Thursday 24 October 2013

Close: Wednesday 20 November 2013

Duration: 20 business days

Late November 2013

Evaluation of Expressions of Interest

The following criteria will be used to evaluate the proposals:

- A. Availability of the requested catalogue components
- B. The applicant's reasons for requesting the components
- C. The designated future use/location of the component.

End 2013

Notification of successful selection

2014-2015

Removal of the Hammerhead Crane including salvage of significant components

2014-2015

Decontamination of lead and zinc chromate and remediation of significant components

2015-2016

Receiving selected component

Any inquiries with respect to this Expression of Interest should be directed to:
hammerhead.inquiries@anz.brookfieldJCI.com

Complete the EOI Application Form.

Email it to:

hammerhead.inquiries@anz.brookfieldJCI.com

Or post it to:

Brookfield NSW Tender Committee (for BJC)

Expressions of Interest Project S6061

Level 22

135 King Street

Sydney NSW 2000

Applications are to be submitted via email or post no later than 5.00pm AEDT on 20 November 2013.

Late submissions will not be accepted.

**** Timing of the removal, EOI process and delivery of components is subject to change.***



Hammerhead Crane Removal Project

(EPBC 2012/6430)

The removal of the Hammerhead Crane from Fleet Base East at Garden Island was approved by the then Minister of Sustainability, Environment, Water, Populations and Communities on 17 July 2013. As part of the conditions of consent, Defence is required to make a targeted call for proposals to accept component(s) of the Hammerhead Crane (except for high heritage value components) for conservation purposes or any use that **sensitively commemorates and interprets the heritage values of the Hammerhead Crane.**

You have received this communication because you have been identified as an interested stakeholder in relation to the Hammerhead Crane. We have identified stakeholders through a variety of mechanisms including respondents to the public consultation process, the stakeholders consulted as part of the 2005 Heritage Assessment report and general enquiries.

Please complete the application form and:

Email it to:

hammerhead.inquiries@anz.brookfieldJCI.com

OR

Post it to:

Brookfield NSW Tender Committee (for BJC)

Expressions of Interest Project S6061

Level 22, 135 King Street, Sydney NSW 2000

1. Applicant's details:

Organisation name (if any)	
First and last name	
Telephone number	
Email	
Address	

2. Preference for component type (A, B, C, D or E):

First Preference	
Second Preference (if any)	

3. Why are you requesting this/these specific component(s)?

--

4. What, if any, connection with the Hammerhead Crane at Garden Island, Sydney, do you have?

5. What do you plan to do with the component(s)? (Where will it be located? How will it be displayed? How will it be commemorated?)

6. Is there any further information that you want to provide to support your application?

Appendix B

Full Copy of Submissions Received

APPLICANT 1

Hammerhead Crane Removal Project

(EPBC 2012/6430)

The removal of the Hammerhead Crane from Fleet Base East at Garden Island was approved by the then Minister of Sustainability, Environment, Water, Populations and Communities on 17 July 2013. As part of the conditions of consent, Defence is required to make a targeted call for proposals to accept component(s) of the Hammerhead Crane (except for high heritage value components) for conservation purposes or any use that sensitively commemorates and interprets the heritage values of the Hammerhead Crane.

You have received this communication because you have been identified as an interested stakeholder in relation to the Hammerhead Crane. We have identified stakeholders through a variety of mechanisms including respondents to the public consultation process, the stakeholders consulted as part of the 2005 Heritage Assessment report and general enquiries.

Please complete the application form and:

Email it to: hammerhead.inquiries@anz.brookfieldJCI.com

OR

Post it to:

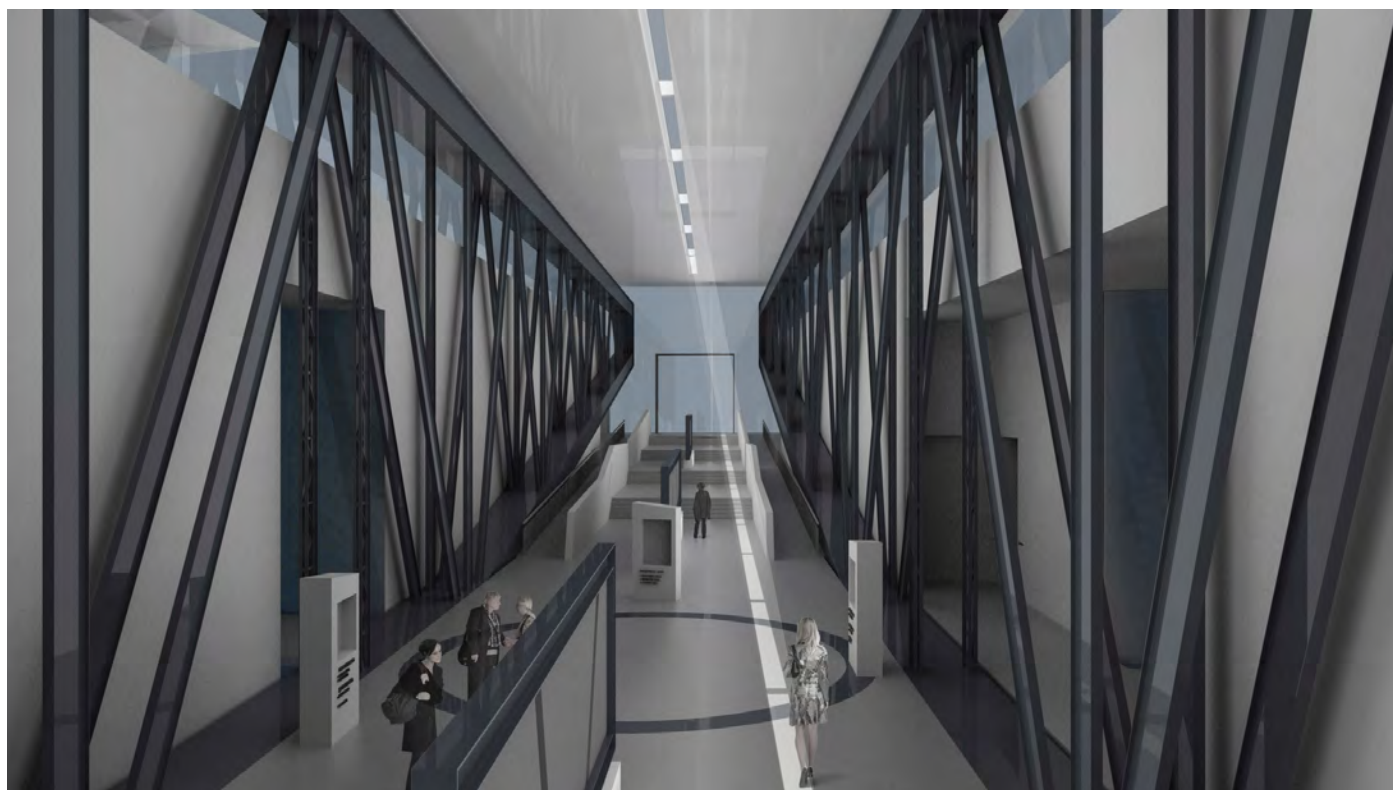
Brookfield NSW Tender Committee (for BJC)

Expressions of Interest Project S6061

Level 22, 135 King Street, Sydney NSW 2000

1. Applicant's details:

Organisation name (if any)	Navy Memorial Proposal
First and last name	APPLICANT 1
Telephone number	OMITTED
Email	OMITTED
Address	OMITTED



Navy Memorial Proposal - Proposal Extract - Journey Axis - Showing the two powerful Truss Jib Components

2. Preference for component type (A, B, C, D or E):

First Preference	A, B, C & D - Crane Structural Components <i>As indicated below and in the provided Navy Memorial Proposal Document</i>
Second Preference (if any)	

3. Why are you requesting this/these specific component(s)?

3.1 The Memorial and the Crane Components - "One and the same"

The Navy Memorial Proposal was initiated to preserve the heritage and community value of the Hammerhead Crane, following its anticipated and now scheduled removal.

The entire Memorial is derived by utilising the Cranes major structural components, in a recognisable and tangible manner, at full scale. As a result, the public is able to fully appreciate the magnitude and size of the Crane. The visitor is able to move through and around it and gain a true appreciation of its powerful presence. They are able to physically reach out and touch the components, gaining that invaluable tangible connection to the historic structure that rises above them and shapes and supports the Memorial in which they stand.

At its core, the Memorial Proposal and this application utilises whole components of the Crane rather than individual pieces, largely preserving the Cranes structural entirety and integrity. Through such resolution, the major structural components of the Crane become key architectural and structural components of the Memorial, as later detailed below and in the provided Navy Memorial Proposal Document.

As a result, the Proposal is nothing without the holistic integration of the majority of the Cranes major structural components. Fundamentally, the Memorial and the Crane components are inherently connected in a way in which they are essentially one and the same.

3.2 Specific Component Requirements

The subsequent pages of this application address the Specific Component Requirements according to the following component categories, noted below as they are referred to in the Navy Memorial Proposal, as well as their associated Application Reference Category.

- 3.2.1 **Crane Truss Jib Components** (Application Reference Category - Type A and B)
- 3.2.2 **Crane Tower Components** (Application Reference Category - Type D)
- 3.2.3 **Pivotal Crane Component** (Application Reference Category - Type C)
- 3.2.4 **Journey Axis Display Components** (Application Reference Category - Type A and B)

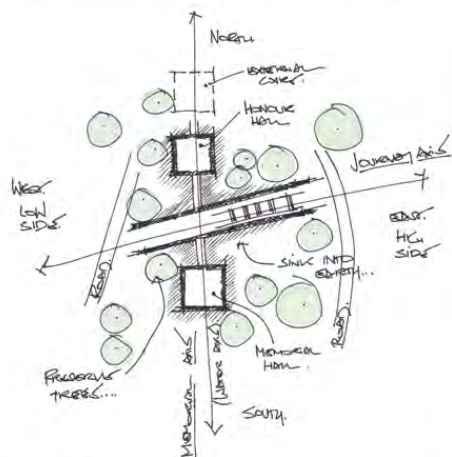
Navy Memorial Proposal - Proposal Extract - Concept - Showing Diagrammatic Representation of Crane Component Integration

Concept

The Memorial is arranged according to a cross layout, an appropriate form in commemorating loss and memorial. This layout is formed by the Journey Axis running across the site (West - East) and the Memorial Axis (South - North).

The building is sited on a hill, yet sinks into it. In turn, the Crane Structural Components are laid to rest within the site, symbolic of burial.

The scale of the resulting architectural program is defined by the Crane Structural Components. The square Crane tower components form the Halls and Courtyard spaces located on the Memorial Axis. The Journey Axis is developed upon the long Crane truss jib components, whose natural form follows the sloping nature of the site. A pivotal Crane component is then located at the junction of the Memorial Axis and Journey Axis, embedded in the concrete floor to affirm the inherent connection and interdependence between the two.



Memorial Axis

The Memorial Axis is buried beneath the earth's surface. It is still, solid, reflective and quiet. It runs directly North to South, straight and true. This axis is central to water. Those that are lost now belong to the water. We reach across the water to honour and remember them.

The Memorial Axis features three defined spaces of memorial, each housing one of the three Crane tower structural components. Such spaces are the External Courtyard, the Honour Hall and the Memorial Hall.

i. External Courtyard

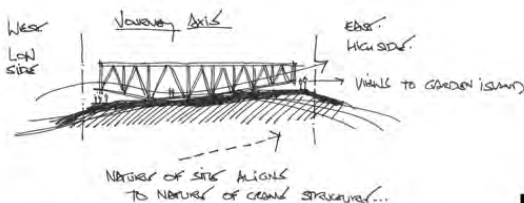
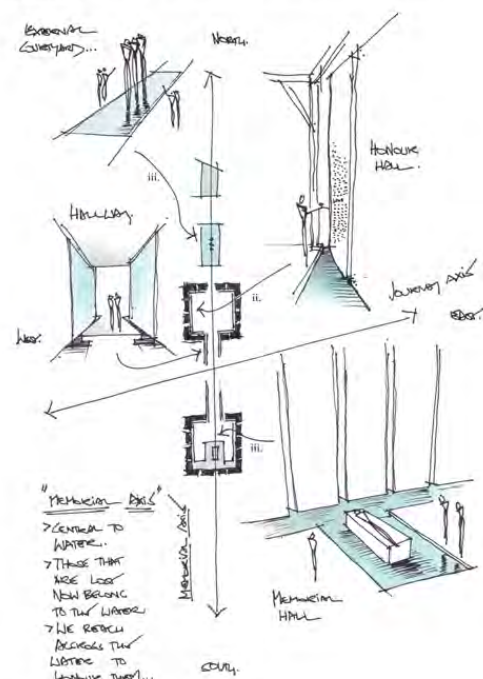
The External Courtyard at the top of the site houses the upper Crane tower component. It is exposed to the elements and directly accessible to the public. The External Courtyard features a central water feature, containing the presence of water along the Memorial Axis and houses the courtyard memorial sculpture. The courtyard memorial sculpture is of three standing sailors looking to the North, paying the Navy Memorial on the Memorial Axis. They represent fallen sailors that now belong to the water, but still stand guard, in service that will forever be honoured and remembered. Proportionally, they are much larger than human scale, reflecting the magnitude of their sacrifice.

ii. Honour Hall

The Honour Hall commemorates all of Australia's war fallen. Each conflict is represented within the concrete columns which rise from the water on the perimeter of the space. The Roll of Honour is referenced by holes in the concrete columns (for the placing of poppies) with each hole representing a life lost. To pay respect one reaches across the water divide and places a poppy. In the case of WWI & WWII the holes continue upward towards the sky and beyond the physical constraints of the columns, depicting the magnitude and totality of such wars. The holes are used in place of names so as to not detract from the Roll of Honour (Honour Wall) of the Australian War Memorial, which stands as one place to name, honour and uphold them all. The Honour Hall is not limited to Navy Service, so as to inclusively honour all of those that have fallen across the various units and cross branch services of the military in past and future service. The Honour Hall will pay further respect to the Roll of Honour of the Australian War Memorial via an interactive interface enabling visitors to access the digital Roll of Honour of the Australian War Memorial while visiting the Memorial, and therefore enabling the visitor to establish further details such as the particular unit of service and Navy context.

iii. Memorial Hall

The Memorial Hall commemorates all of Australia's Navy fallen. The Memorial Hall houses a single grave sculpture, suspended in water. The space is still, solid, reflective and quiet. The architectural form is split along the line of axis, on which the grave lies, conveying the weight and singular importance the grave has in shaping the Memorial. On the axis, light rays cast over the sculpture from above and filtered light enters the Hall across the water from beyond. Appropriately, the single grave sculpture forms both the start and end of the Memorial Axis and anchors the entire Memorial. There may be text above or near the sculpture, such as *Let Us Forget, and nothing more.*



Journey Axis

The Journey Axis serves as the primary access spine for the Memorial, connecting the lower Western side of the site to the higher Eastern side and subsequently forming the two primary entries. Spatially, the Journey Axis scale and form is defined according to the two long Crane truss jib components, whose natural form appropriately follows the sloping nature of the site. From arrival at the main entry on the lower Western side, the axis then ascends gradually upwards, to the upper entry on the Eastern side and project apex with views over the bay, Garden Island and the Navy and Crane site.

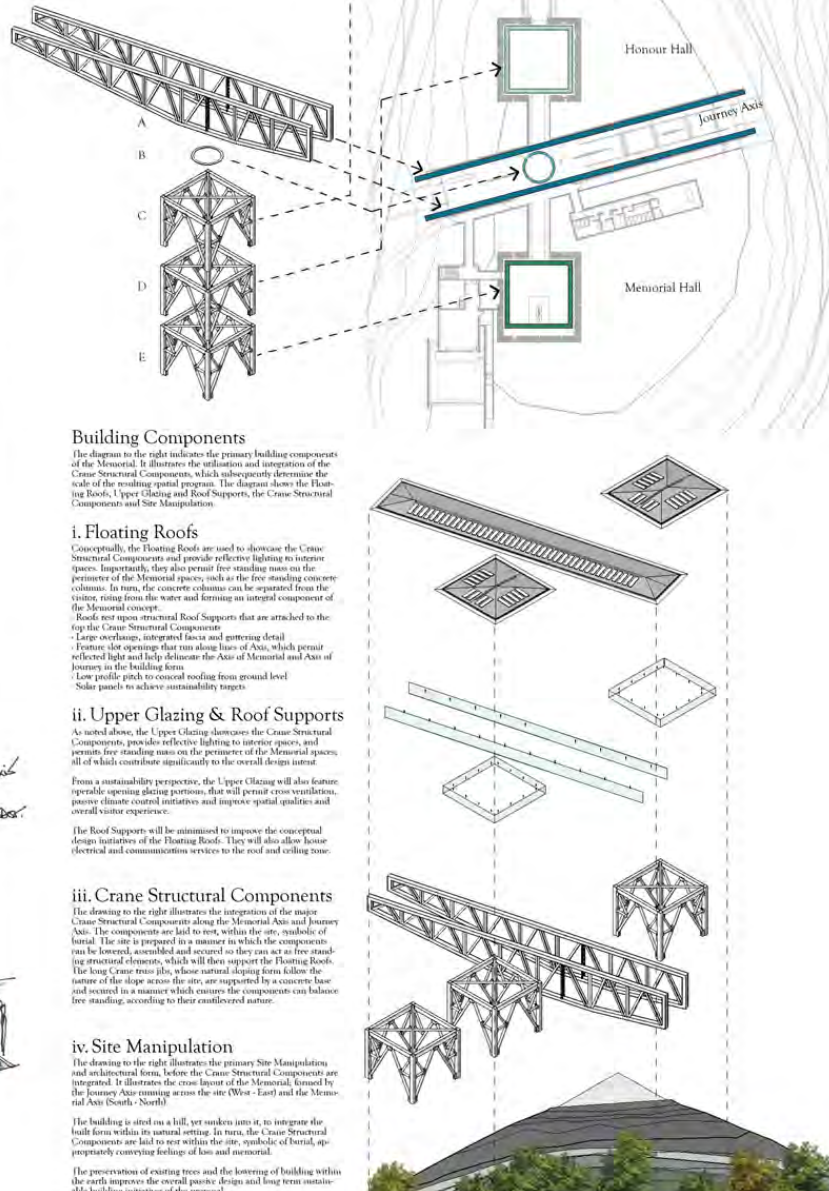
Along the Journey Axis the Memorial honours the history of Australia's Navy in a commemorative context. The displays will commemorate content from the colonial times (pre-federation), Commonwealth Naval Force (1901-5) and the Royal Australian Navy (1911-5) and future Navy structures. Accordingly, the Memorial is prepared as the Australian Navy Memorial to commemorate all Australian Navies, past, present and future. The displays along the Journey Axis will feature text, imagery and footage in physical and interactive mediums, from various naval eras. The Journey Axis will depict joy, heartache and pride. Conveying the brutality of war and life at sea, and the amazing feats, accomplishments and sacrifices of Australia's Navy personnel.

Crane Structural Components

The scale of the architectural program is defined by the Crane Structural Components. The Crane is regarded for its size and scale. When its components are incorporated into an architecture, mind context, an empowering and monumental form results. A form that is strong, inspiring and honourable; in appropriate scale and language for a public Memorial of this nature.

The square Crane tower components form the Halls and Courtyard spaces located on the Memorial Axis. The Journey Axis is developed upon the long Crane truss jib components, whose natural form follows the sloping nature of the site. A pivotal Crane component is then located at the junction of the Memorial Axis and Journey Axis, embedded in the concrete floor to affirm the inherent connection and interdependence between the two.

- A. Crane Truss Jib (2 x 40 - 85m Long)
- B. Pivotal Crane Component (just above of wharf, not whole component)
- C. Upper Crane Tower Component (Base 15.2 x 15.2m Grid)
- D. Mid Crane Tower Component (Base 15.2 x 15.2m Grid)
- E. Lower Crane Tower Component (Base 15.2 x 15.2m Grid)



Building Components

The diagram to the right illustrates the primary building components of the Memorial. It illustrates the utilisation and integration of the Crane Structural Components, which subsequently determine the scale of the resulting spatial program. The diagram shows the Floating Roofs, Upper Glazing and Roof Supports, the Crane Structural Components and Site Manipulation.

i. Floating Roofs

Conceptually, the Floating Roofs are used to showcase the Crane Structural Components and provide reflective lighting to interior spaces. Importantly, they also permit free standing mass on the perimeter of the Memorial spaces, such as the free standing concrete columns. In turn, the concrete columns can be separated from the existing rising from the water and forming an integral component of the Memorial concept.

- Roofs rest upon structural Roof Supports that are attached to the top of the Crane Structural Components
- Large overhangs, integrated fascia and guttering detail
- Frame dot opening that run along lines of Axis, which permit reflected light and help delineate the Axis of Memorial and Axis of Journey in the building form
- Low profile pitch to conceal roofing from ground level
- Solar panels to achieve sustainability targets

ii. Upper Glazing & Roof Supports

As noted above, the Upper Glazing showcases the Crane Structural Components, provides reflective lighting to interior spaces, and permits free standing mass on the perimeter of the Memorial spaces, all of which contribute significantly to the overall design intent.

From a sustainability perspective, the Upper Glazing will also feature operable opening during portions, that will permit cross ventilation, passive climate control initiatives and improve spatial qualities and overall visitor experience.

The Roof Supports will be minimised to improve the conceptual design initiatives of the Floating Roofs. They will also allow house electrical and communications services to the roof and ceiling zone.

iii. Crane Structural Components

The drawing to the right illustrates the integration of the major Crane Structural Components along the Memorial Axis and Journey Axis. The components are laid to rest, within the site, symbolic of burial. The site is prepared in a manner in which the components can be lowered, assembled and secured so they can act as free standing structural elements, which will then support the Floating Roofs. The long Crane truss jib, whose natural sloping form follows the nature of the slope across the site, are supported by a concrete base and secured in a manner which ensures the components can balance free standing, according to their engineered nature.

iv. Site Manipulation

The drawing to the right illustrates the primary Site Manipulation and architectural form, before the Crane Structural Components are integrated. It illustrates the cross layout of the Memorial, formed by the Journey Axis running across the site (West - East) and the Memorial Axis (South - North).

The building is sited on a hill, yet sinks into it, to integrate the built form within its natural setting. In turn, the Crane Structural Components are laid to rest within the site, symbolic of burial, appropriately conveying feelings of loss and memorial.

The preservation of existing trees and the lowering of building within the earth improves the overall purpose design and long term sustainable building initiative of the memorial.



Site Photos

- i. Harbour Location & Views
- ii. Adjacent Crane & Garden Island
- iii. Highly Valued Botanical Gardens
- iv. Royal Sculpture By The Sea Winner
- v. Volunteer Memorial
- vi. Fleet Steps

3.2.1 Crane Truss Jib Components - (2 of)

(Application Reference Category - Type A and B)

Use: Primary Architectural and Structural Components and Symbolic Relevance

The two long Crane Truss Jib Components, whose natural form follow the sloping nature of the site, form the Journey Axis of the Memorial.

About the Journey Axis

The Journey Axis serves as the primary access spine for the Memorial, connecting the lower Western side of the site to the higher Eastern side and subsequently forming the two primary entries. Spatially, the Journey Axis scale and form is defined according to the two long Crane Truss Jib Components, whose natural form appropriately follow the sloping nature of the site. From arrival at the main entry on the lower Western side, the axis then ascends gradually upwards, to the upper entry on the Eastern side and project apex with views over the bay, Garden Island and the Navy and Crane site.

Specific Requirements

The two long Crane Truss Jib Components are utilised in their structural entirety.

The horizontal cross member components joining the two Crane Truss Jib Components are only fractionally utilised (See Journey Axis Display Components), remaining horizontal cross member components can then be allocated to subsequent applicants.

Non-Structural components, such as access platforms, hand rails and central running and operational components etc may be allocated to subsequent applicants.



Navy Memorial Proposal - Proposal Extract - Main Arrival - Shows the architectural and structural intent of the Truss Jib Components; prominently exposed and utilised as primary structural components supporting the floating roof.

3.2.2 Crane Tower Components - (3 of)

(Application Reference Category - Type D)

Use: Primary Architectural and Structural Components and Symbolic Relevance

The three square Crane Tower Components, which are very symmetrical in nature, form the hall spaces along the Memorial Axis of the Memorial.

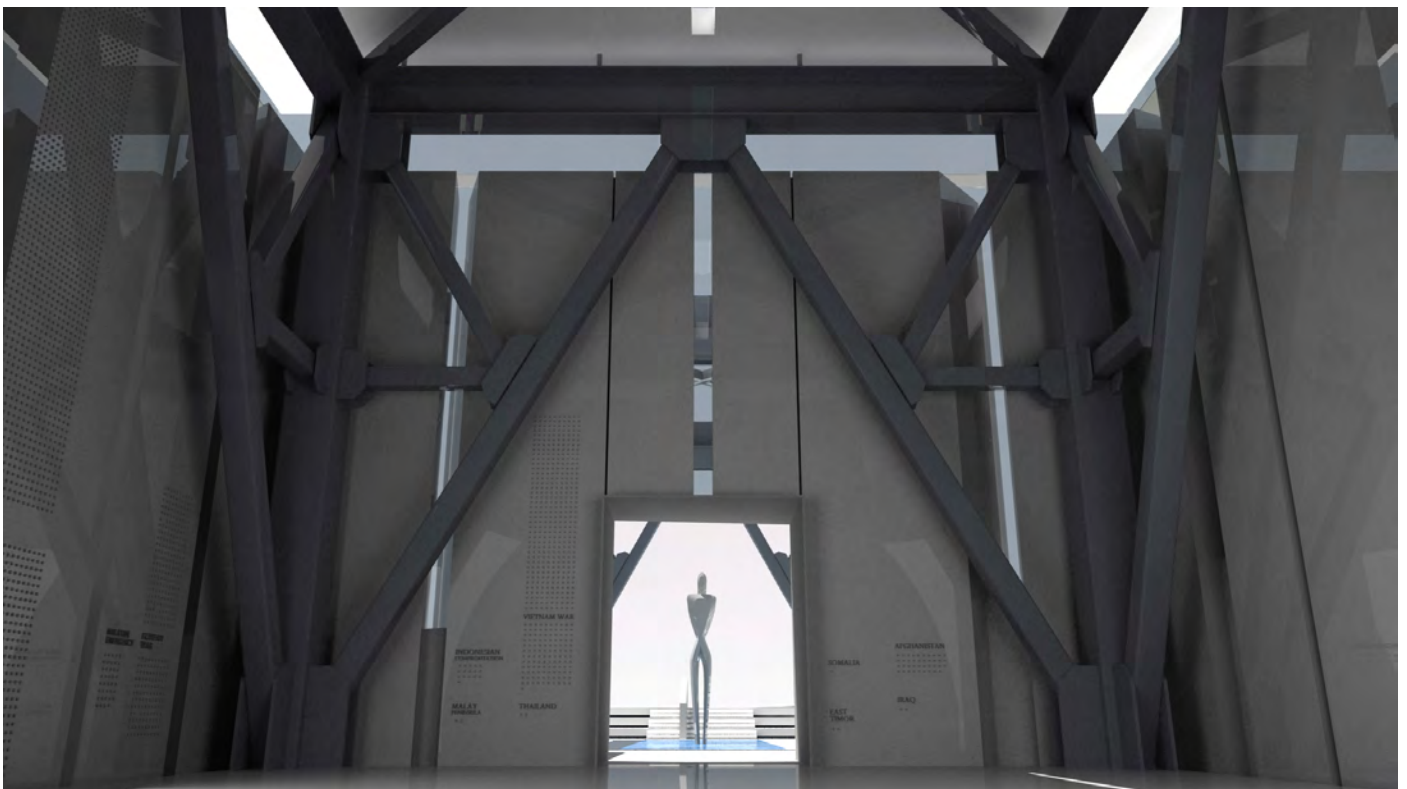
About the Memorial Axis

The Memorial Axis is buried beneath the earth's surface. It is still, solid, reflective and quiet. It runs directly North to South, straight and true. This axis is central to water. Those that are lost now belong to the water. We reach across the water to honour and remember them. The Memorial Axis features three defined spaces of memorial, each formed by one of the three Crane Tower Components. Such spaces are the External Courtyard, the Honour Hall and the Memorial Hall.

Specific Requirements

The three Crane Tower Components are utilised in their structural entirety.

Non-Structural components, such as access platforms and hand rails etc may be allocated to subsequent applicants.



Navy Memorial Proposal - Proposal Extract - Honour Hall Arrival - Showing one of the Crane Tower Components

3.2.3 Pivotal Crane Component

(Application Reference Category - Type C)

Use: Primary Architectural Component - Symbolic Relevance

The Pivotal Crane Component, part of the Slew, is located at the junction of the Memorial Axis and Journey Axis, embedded in the concrete floor to affirm the inherent connection and interdependence between the two.

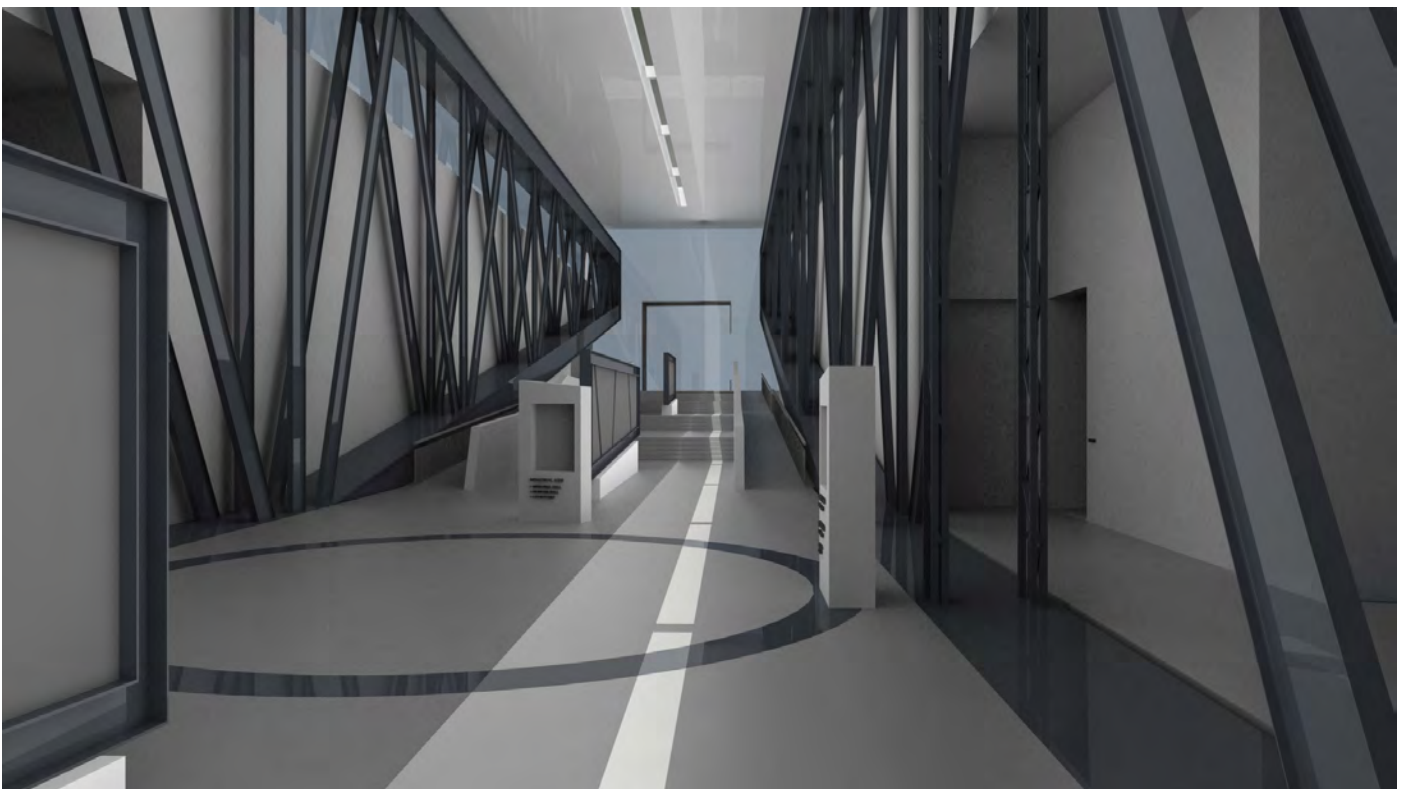
Specific Requirements

Only part of the Slew Component is required.

The intent is to utilise a part of the Slew Component, at full scale and in its circular entirety.

The utilised component should fittingly convey the symbolic and physical reminder of the connection between the Jib and Tower Components; and therefore the connection between the Journey Axis and Memorial Axis of the Memorial. It should also convey feelings of flexibility and movement, which may be best indicated by utilising the cog-like circular component or the top plate circular component (in due consideration of Defence Allocated Heritage Components).

After selection of the ideal component, the remaining components may be allocated to subsequent applicants.



Navy Memorial Proposal - Proposal Extract - Showing the Pivotal Crane Component

3.2.4 Journey Axis Display Components

(Application Reference Category - Type A and B)

Use: Central Architectural Display Components - Symbolic Relevance

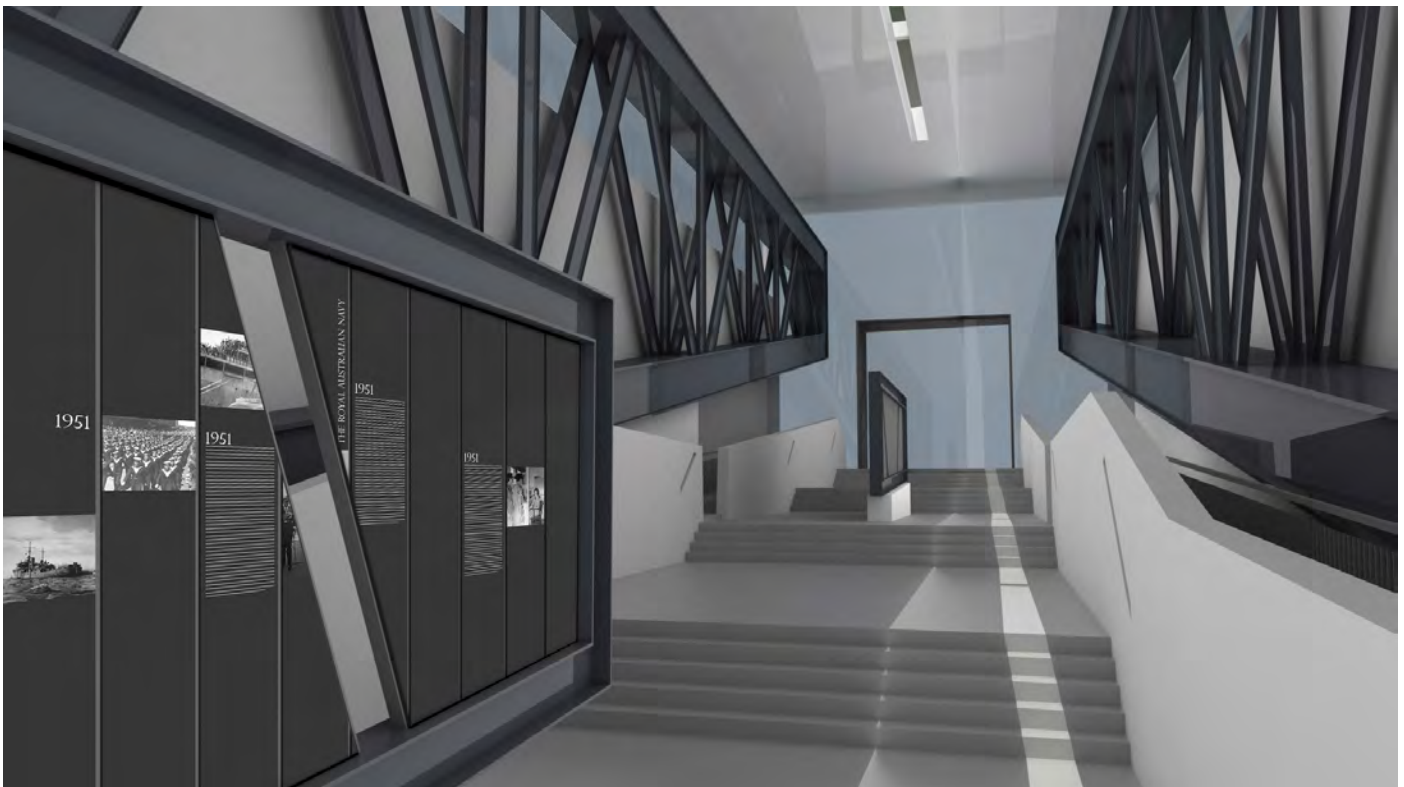
The Memorial utilises recycled Crane components to create central Displays along the Journey Axis of the Memorial. It is intended that such components will be sourced from the horizontal cross member components which join the two long Truss Jib Components together.

About the Displays

Along the Journey Axis the Memorial houses the history of Australia's Navies in a commemorative context. The displays will commemorate content from the colonial navies (pre-federation), Commonwealth Naval Forces (1901>) and the Royal Australian Navy (1911>) and future Navy structures. Accordingly, the Memorial is proposed as the Australian Navy Memorial to commemorate all Australian Navies, past, present and future. The displays along the Journey Axis will feature text, imagery and footage in physical and interactive mediums, from various naval eras. The Journey Axis will depict joy, heartache and pride. Conveying the brutality of war and life at sea; and the amazing feats, accomplishments and sacrifices of Australia's Navy personnel. The Memorial will also feature specific sections regarding the history of the Hammerhead Crane and its transformation in to the Memorial.

Specific Requirements

Only a fraction of the horizontal cross member components are utilised to create the Journey Axis Displays. After the selection of such components, the remaining horizontal cross member components can then be allocated to subsequent applicants.



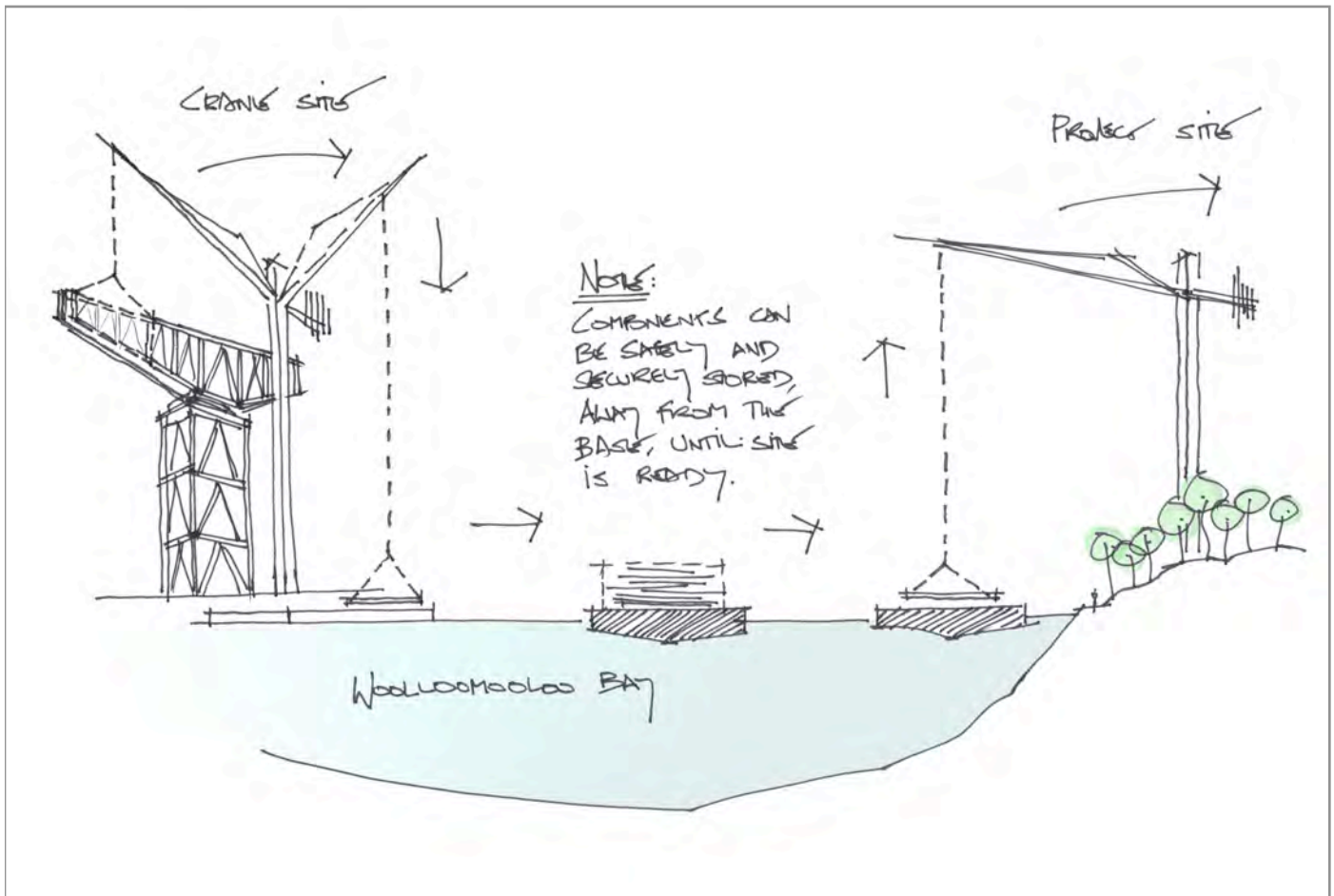
Navy Memorial Proposal - Proposal Extract - Journey Axis - Showing the Display Components

3.3 Crane Component Disassembly Intent and Considerations

The desired intent is to disassemble the Crane in an efficient, cost effective manner, that causes the least amount of disruption to all stakeholders. The most urgent matter for the Navy is to remove the Crane as quickly and as safely as possible so the Base can operate safely and reach its required operating potential.

The Memorial Proposal permits the Crane to be disassembled in a timely manner, as soon as permitted, treated as required, then safely and securely stored at Woolloomooloo Bay away from the Navy Base; ensuring that the Navy Base can operate in a safe and secure manner. Then, when the Site is ready, the Crane Structural Components can be lifted into position.

Depending on all relevant cost, safety and physical considerations, the Crane can be disassembled in the most efficient manner, by removing the components in whole sub-sections, that will minimise reassembly of the Crane Structural Components as designated by the Memorial Proposal.



Navy Memorial Proposal - Proposal Extract - Crane Component Disassembly Intent and Considerations
Indicating that large sections of the components could be removed and treated as whole parts, minimising disassembly and assembly.

4. What, if any, connection with the Hammerhead Crane at Garden Island, Sydney, do you have?

As a local resident of Paddington I am familiar with the Hammerhead Crane and the ongoing discussion and debate surrounding its preservation and removal; as well as the context of its location at Garden Island and its surroundings, including the adjacent Botanical Garden Site of the Navy Memorial Proposal.

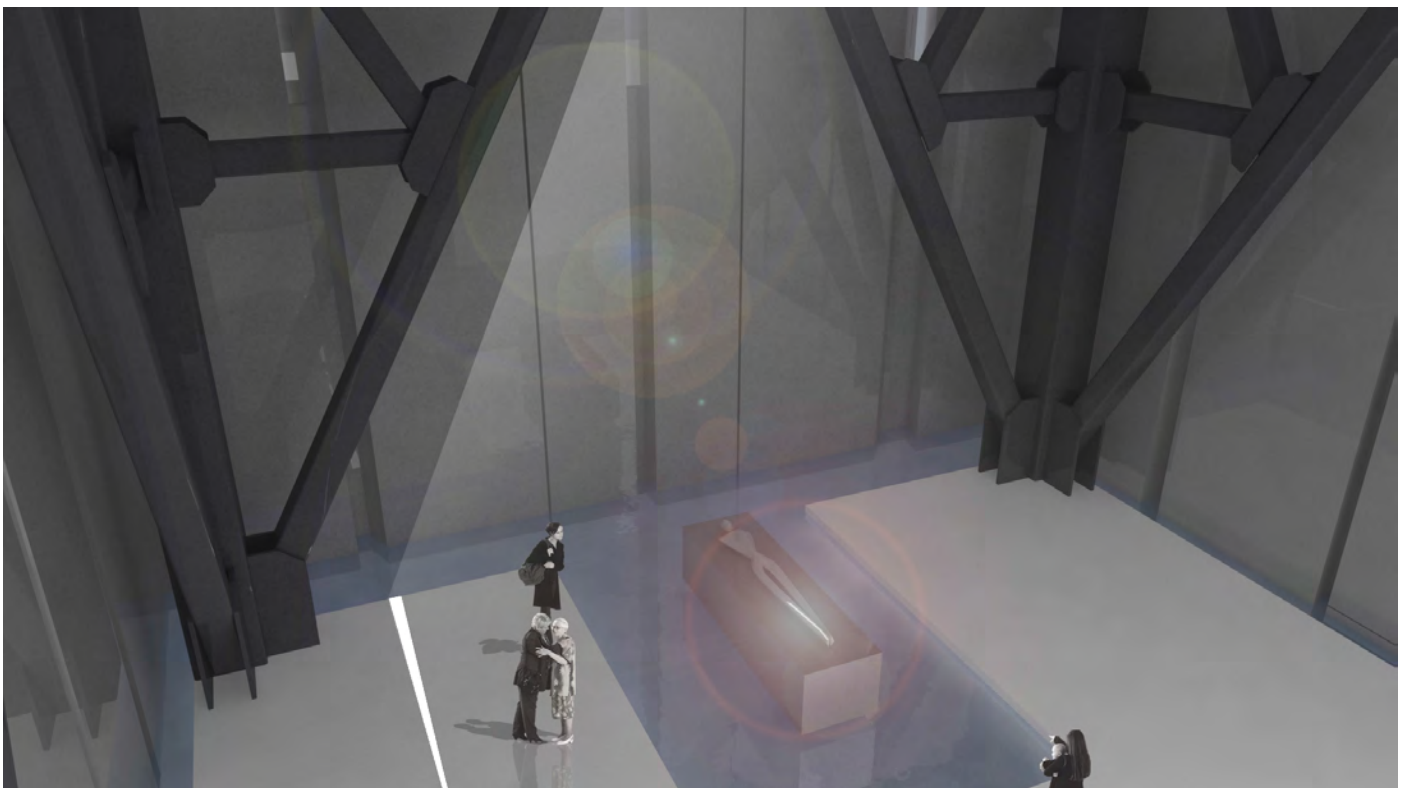
However, more fittingly, I have received comment and support from various individuals with a direct and deeply personal connection to the Navy and the Garden Island Hammerhead Crane, whose comment speaks volumes in regard to this application.

Comment 1 Extract - From a person of dedicated service and multiple deployments with the RAN

"It may be an inanimate object which is slowly rusting away, but it truly is a symbol and an icon to so many people. I applaud you on your proposal and hope that all levels of Government come to the party and get your proposal over the line and in place. It truly is a magnificent gesture."

Comment 2 Extract - From Key RAN Heritage Personnel

"I personally commend your inspiring concept which both preserves the heritage value of the Crane and would provide a world class memorial for the Navy. Its unique architecture and location would quickly make it an icon in Australia and around the world."



Navy Memorial Proposal - Proposal Extract - Memorial Hall - Showing one of the Crane Tower Components

5. What do you plan to do with the component(s)? (Where will it be located? How will it be displayed? How will it be commemorated?)

5.1 Where will it be located?

Mrs Macquaries Point - The Royal Botanic Garden Sydney - Domain Yurong Precinct.

The proposed site, that looks over the adjacent Garden Island Navy Base, ensures prominent public access and preserves a tangible connection to our Navy past, present and future.

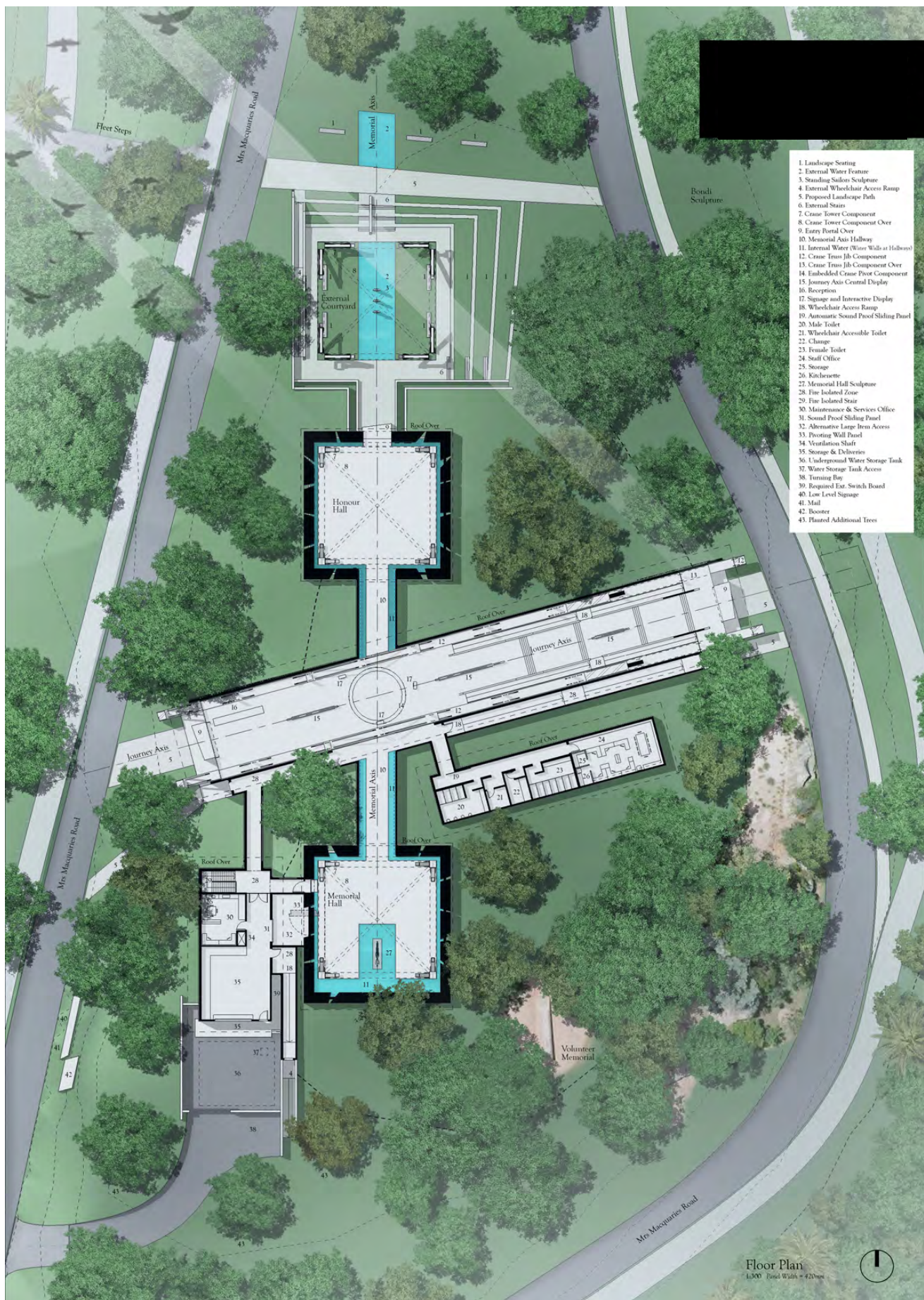
Appropriately sited at Sydney Harbour adjacent Garden Island, the proposed site is a location that is of great significance to Australia's Naval History. Additionally, a key initiative of the Memorial Proposal is ensuring prominent public access, fitting of a highly valued public work. With an annual visitation of 3,544,344 people* the Royal Botanic Garden Sydney is an appropriate setting for such a Memorial. With the Gardens already catering for public buildings such as the Art Gallery of NSW; as well as public and community facilities and activities such as the Charlton Pool.

This site is an extremely valued and highly sensitive location. The site is of tremendous value to Sydney, NSW and Australia as an integral component of the Royal Botanic Garden Sydney. As such the Memorial Proposal will look to sustain valued environmental qualities and implement sustainable design solutions, attune to detailed site analysis and specialist/stakeholder input.

*www.rbgsyd.nsw.gov.au/welcome/royal_botanic_garden/fast_facts - June 2013



Navy Memorial Proposal - Proposal Extract - Main Arrival - Showing the Crane Truss Jib Components



Navy Memorial Proposal - Proposal Extract - Floor Plan - Not to scale

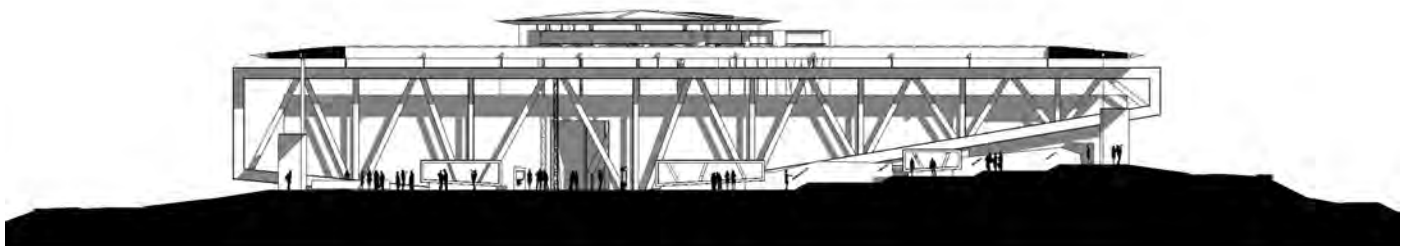
5.2 How will it be displayed?

As noted earlier, the Memorial and Crane components become one and the same.

As illustrated below, the Crane components are exposed and displayed at full scale, preserving their structural integrity in a manner in which their size and grandeur can be fully appreciated. Appropriately, the components form and shape the resulting architecture and express the true character, nature and historical significance of the Memorial.

Importantly, the Memorial Proposal permits the Crane components to be:

- Incorporated and utilised as functional structural components; at full scale, conveying and preserving their astounding size and engineering qualities
- Predominately sheltered and protected from the elements; preserving their character and integrity for future generations
- Exposed, displayed and showcased in a manner in which they can be physically touched, admired and experienced by the public for many years to come



Journey Axis Section
1:500 Total Width = 42.0m



Memorial Axis Section
1:500 Total Width = 42.0m

Navy Memorial Proposal - Proposal Extract - Sections - Not to scale

5.3 How will it be commemorated?

The Navy Memorial Proposal commemorates the Hammerhead Crane by providing it with a new life and a definitive purpose that is of great significance to Australia's Navy and Navy Personnel.

In a natural progression, the Crane is utilised in a functional and structural manner, that is highly fitting of its powerful nature. Further, such integration is done so in way in which the Crane can symbolically honour those which it has served.

The Memorial is arranged according to a cross layout, an appropriate form in commemorating loss and memorial. This layout is formed by the Journey Axis running across the site (West - East) and the Memorial Axis (South - North). The building is sited on a hill, yet sunken into it. In turn, the Crane Structural Components are laid to rest within the site, symbolic of burial.

As previously noted, such symbolism is achieved through the following architectural resolve.

The square Crane Tower Components form the Halls and Courtyard spaces located on the Memorial Axis. The Journey Axis is then developed upon the long Crane Truss Jib Components, whose natural form follow the sloping nature of the site.

Finally, the Pivotal Crane component is then located at the junction of the Memorial Axis and Journey Axis; embedded in the concrete floor to affirm the inherent connection and interdependence between the two.



Navy Memorial Proposal - Proposal Extract - Honour Hall - Showing one of the Crane Tower Components

6. Is there any further information that you want to provide to support your application?

Yes. This application is supported by the following:

6.1 Navy Memorial Proposal Document

Format: PDF 34.2MB - 7 Presentation Panels - Panel Print Size 420mm x 1188mm

The **Navy Memorial Proposal Document** is provided for full consideration and review in regard to this application. The document is available via the link below.

Public Link: <http://navymemorialproposal.org/the-proposal-2>

6.2 Garden Island Hammerhead Crane Disassembly and Preservation Federal Petition

The above Federal Petition will be presented to the House of Representatives to urge the Minister for Defence to ensure that the Garden Island Hammerhead Crane will be appropriately disassembled and stored in a manner that ensures the Crane, including Major Structural Components, can be retained and utilised for the proposed Navy Memorial.

Accumulated support of the above Petition is of direct and significant consideration in regard to this application.

Public Link: <http://navymemorialproposal.org/petitions>

6.3 Right to withdraw

The Navy Memorial Proposal is subject to planning approval and funding. Allocation of the Requested Crane Components to the Memorial, as indicated in this application, would streamline subsequent planning and funding procedure; as the Memorial Proposal is only possible with attainment of the Crane Components. However, if required planning or funding cannot be attained, the Applicant upholds the right to withdraw its request of such components and its associated obligations. In which case such components may be allocated to subsequent applicants.

Thank you for the opportunity to submit this EOI which sensitively commemorates and interprets the heritage values of the Hammerhead Crane. All the best with the subsequent review and assessment process and thank you in advance for your valued time.

Kind Regards,

APPLICANT 2

Hammerhead Crane Removal Project

(EPBC 2012/6430)

The removal of the Hammerhead Crane from Fleet Base East at Garden Island was approved by the then Minister of Sustainability, Environment, Water, Populations and Communities on 17 July 2013. As part of the conditions of consent, Defence is required to make a targeted call for proposals to accept component(s) of the Hammerhead Crane (except for high heritage value components) for conservation purposes or any use that sensitively commemorates and interprets the heritage values of the Hammerhead Crane.

You have received this communication because you have been identified as an interested stakeholder in relation to the Hammerhead Crane. We have identified stakeholders through a variety of mechanisms including respondents to the public consultation process, the stakeholders consulted as part of the 2005 Heritage Assessment report and general enquiries.

Please complete the application form and:

Email it to:

hammerhead.inquiries@anz.brookfieldJCI.com

OR

Post it to:

Brookfield NSW Tender Committee (for BJC)

Expressions of Interest Project S6061

Level 22, 135 King Street, Sydney NSW 2000

1. Applicant's details:

Organisation name (if any)	
First and last name	APPLICANT 2
Telephone number	OMITTED
Email	OMITTED
Address	OMITTED

2. Preference for component type (A, B, C, D or E):

First Preference	Type B by two
Second Preference (if any)	Type B by one

3. Why are you requesting this/these specific component(s)?

Built by the Sydney Steel Company between 1948 and 1951, Garden Island's Hammerhead Crane was the final part of Sydney Steel's wartime commitment to construct key parts of the Captain Cook Graving Dock.

During 1941 my grandfather Douglas Stuart volunteered the family company, Sydney Steel, to build the dock's two floating caissons or gates as a service to the nation. That scope of work soon expanded to include the steelwork for the dock's machine shop, the fabrication and erection of its three dockside cranes and the Arrol designed 250-ton cantilever wharf crane.

The Hammerhead Crane represents an important part of the company's history and more broadly the industrial history of Marrickville. Sydney Steel maintained a photographic record of the crane's construction covering its pre-assembled at Marrickville and its erection at Garden Island.

I am requesting the steel plates so they can be part of a display using these photographs.

4. What, if any, connection with the Hammerhead Crane at Garden Island, Sydney, do you have?

My father Colin Stuart built the Hammerhead Crane. In May 1948 Colin and a team of six from Sydney Steel started erecting the crane's tower at the fitting-out-wharf, Garden Island. By the time the crane was handed over to the Navy in March 1951 that team had grown to thirty-five boilermakers, fitters, riggers and electricians.

In June 1952 an article Colin wrote on how the crane was built was published in 'Garden Island Magazine', a monthly social club publication for staff working at Sydney's Garden Island Naval Base. The photographs were not published but I have now incorporated them into a photo book, which I am in the process of donating to various organisations.

5. What do you plan to do with the component(s)? (Where will it be located? How will it be displayed? How will it be commemorated?)

I am currently the custodian of the photographs the Sydney Steel Company took of the crane's construction and working with two organisations with regards to exhibiting the photographs and the requested steel plates:

1. **The Powerhouse Museum.** I have donated a copy of a book (along with original photographs) I have written about building the Hammerhead Crane that incorporates my father's original article with the photographs taken during the cranes construction. The book will be part of the museum's library while the photographs will be used for exhibition purposes. The steel plate would be a perfect accompaniment to the set of original photographs.
2. **Marrickville Council.** I am in the process of providing the council's local history depart with a copy of a book and photographs on the history of the Sydney Steel Company. That book includes the crane's construction at Sydney Steel's premises at 46 Edinburgh Road Marrickville. As with the above the steel plate would be used as part of a local history display along with photographs.

6. Is there any further information that you want to provide to support your application?

I have attached a PDF file of the relevant chapter from my book Sydney's Titan showing the crane's construction at Marrickville. **Sydney's Titan.PDF**

APPLICANT 3

Hammerhead Crane Removal Project

(EPBC 2012/6430)

The removal of the Hammerhead Crane from Fleet Base East at Garden Island was approved by the then Minister of Sustainability, Environment, Water, Populations and Communities on 17 July 2013. As part of the conditions of consent, Defence is required to make a targeted call for proposals to accept component(s) of the Hammerhead Crane (except for high heritage value components) for conservation purposes or any use that **sensitively commemorates and interprets the heritage values of the Hammerhead Crane.**

You have received this communication because you have been identified as an interested stakeholder in relation to the Hammerhead Crane. We have identified stakeholders through a variety of mechanisms including respondents to the public consultation process, the stakeholders consulted as part of the 2005 Heritage Assessment report and general enquiries.

Please complete the application form and:

Email it to:

hammerhead.inquiries@anz.brookfieldJCI.com

OR

Post it to:

Brookfield NSW Tender Committee (for BJC)

Expressions of Interest Project S6061

Level 22, 135 King Street, Sydney NSW 2000

1. Applicant's details:

Organisation name (if any)	
First and last name	APPLICANT 3
Telephone number	OMITTED
Email	OMITTED
Address	OMITTED

2. Preference for component type (A, B, C, D or E):

First Preference	
Second Preference (if any)	

3. Why are you requesting this/these specific component(s)?

Sentimental reasons. I don't want anything big but would like a keepsake such as a rivet or metal label.

4. What, if any, connection with the Hammerhead Crane at Garden Island, Sydney, do you have?

My father (Lt Col. Ronald A.J. Thompson, OBE) was the Technical Director of the Commonwealth Department of Works (NSW Div.) responsible for the construction of the crane. It was known in engineering circles as "Ron's crane". I recall visiting Garden Island with my father during construction. I inherited a blueprint drawing of the crane which I have passed to my son Andrew (also a civil engineer).

5. What do you plan to do with the component(s)? (Where will it be located? How will it be displayed? How will it be commemorated?)

I do not intend to display any keepsake. It would be retained by my family.

6. Is there any further information that you want to provide to support your application?

No.

APPLICANT 4

Hammerhead Crane Removal Project

(EPBC 2012/6430)

The removal of the Hammerhead Crane from Fleet Base East at Garden Island was approved by the then Minister of Sustainability, Environment, Water, Populations and Communities on 17 July 2013. As part of the conditions of consent, Defence is required to make a targeted call for proposals to accept component(s) of the Hammerhead Crane (except for high heritage value components) for conservation purposes or any use that **sensitively commemorates and interprets the heritage values of the Hammerhead Crane.**

You have received this communication because you have been identified as an interested stakeholder in relation to the Hammerhead Crane. We have identified stakeholders through a variety of mechanisms including respondents to the public consultation process, the stakeholders consulted as part of the 2005 Heritage Assessment report and general enquiries.

Please complete the application form and:

Email it to:

hammerhead.inquiries@anz.brookfieldJCI.com

OR

Post it to:

Brookfield NSW Tender Committee (for BJC)

Expressions of Interest Project S6061

Level 22, 135 King Street, Sydney NSW 2000

1. Applicant's details:

Organisation name (if any)	Private application
First and last name	APPLICANT 4
Telephone number	OMITTED
Email	<u>OMITTED</u>
Address	OMITTED

2. Preference for component type (A, B, C, D or E):

First Preference	B
Second Preference (if any)	C

3. Why are you requesting this/these specific component(s)?

This request is associated with a personal interest in the Garden Island crane, as outlined below. The removal of the crane from the skyline will be a sentimental loss to our family, and having such a memento will be a nice alternative.

4. What, if any, connection with the Hammerhead Crane at Garden Island, Sydney, do you have?

We have a strong family connection with the Garden Island crane. My grandfather, Colonel Ron Tompson, was Technical Director of the Commonwealth Department of Works and was heavily involved in its construction.

5. What do you plan to do with the component(s)? (Where will it be located? How will it be displayed? How will it be commemorated?)

Our intent is to have this component displayed in our home, and records placed in the family archive. We actively maintain family records and history and this will be a valuable addition.

6. Is there any further information that you want to provide to support your application?

Unrelated to our family connection, I am a structural engineer with significant interest in major structures.

APPLICANT 5

Hammerhead Crane Removal Project

(EPBC 2012/6430)

The removal of the Hammerhead Crane from Fleet Base East at Garden Island was approved by the then Minister of Sustainability, Environment, Water, Populations and Communities on 17 July 2013. As part of the conditions of consent, Defence is required to make a targeted call for proposals to accept component(s) of the Hammerhead Crane (except for high heritage value components) for conservation purposes or any use that **sensitively commemorates and interprets the heritage values of the Hammerhead Crane**.

You have received this communication because you have been identified as an interested stakeholder in relation to the Hammerhead Crane. We have identified stakeholders through a variety of mechanisms including respondents to the public consultation process, the stakeholders consulted as part of the 2005 Heritage Assessment report and general enquiries.

Please complete the application form and:

Email it to:

hammerhead.inquiries@anz.brookfieldJCI.com

OR

Post it to:

Brookfield NSW Tender Committee (for BJC)

Expressions of Interest Project S6061

Level 22, 135 King Street, Sydney NSW 2000

1. Applicant's details:

Organisation name (if any)	
First and last name	APPLICANT 5
Telephone number	OMITTED
Email	OMITTED
Address	OMITTED

2. Preference for component type (A, B, C, D or E):

First Preference	Three (3 x) pieces of component B
Second Preference (if any)	

3. Why are you requesting this/these specific component(s)?

We are requesting several components of the crane as a memento of our father, Errol Noble, and his work, as the structural engineer for the building of the crane. Three of his children request a component each.

4. What, if any, connection with the Hammerhead Crane at Garden Island, Sydney, do you have?

Our father, Errol Noble, was the Structural Engineer at Sydney Steel Co Pty Ltd, the company which designed and fabricated the steel for the crane.

Our Dad, often talked of his involvement in the structural design and building of the crane, telling us particularly about building it first on the ground at the company's premises in Marrickville to make sure all the pieces fitted together before construction in situ. We still have the original blueprint drawings for the crane.

5. What do you plan to do with the component(s)? (Where will it be located? How will it be displayed? How will it be commemorated?)

This will be a personal commemoration; each of the recipients retaining a piece and displaying in our own way. In my case, my husband and I have a property in the Southern Tablelands of NSW, with extensive gardens and we would use our piece decoratively/ as a centre piece in the garden. If required we would add a plaque/ description of the heritage of the piece for future reference. All pieces will be treated with sensitivity to commemorate our father and his work. With regards our application, none of the pieces will be used as a public recognition of the crane.

6. Is there any further information that you want to provide to support your application?

As our father was there from the very beginnings of the crane, it would be also good to be included in any formalities of the start of the dismantling of the crane.

Please note that if we are not successful in our application for a piece of the crane as requested above, we would be happy with an even smaller component each.