

provides further discussion on the DGRs issued for MP10_0048 MOD 4 in respect to the overall significance of the HCT, an expanded assessment of heritage impact on the Millers Point Conservation Area and the potential heritage item (i.e. the HCT) and measures to mitigate potential detrimental heritage impact;

- Options Assessment Report: this report provides a qualitative and quantitative assessment of three options for the HCT, including its retention 'as is', its 'adaptive re-use' and its 'removal';
- Noise and Vibration Assessment and accompanying Preliminary Noise and Vibration Management Plan;
- Revised Air Quality Management Plan and Asbestos Management Plan; and
- Revised Statement of Commitments: this revised Statement includes commitments to undertake the project in accordance with the updated Air Quality Management Plan and the Asbestos Management Plan.

The Department notified Council, key agencies and the National Trust of the submission of the RTS. It was also placed on the Department's website. Three submissions were subsequently received, as summarised below:

NSW Environmental Protection Authority (EPA)

The EPA notes that the revised Air Quality Management Plan (AQMP) has generally addressed the air issues previously raised by the EPA, including an Asbestos Management Plan (AMP). Subject to the AMP being amended to clarify the work requirements and contingencies that will be implemented in the event that friable asbestos material is encountered, the EPA raises no objection to the proposal.

The EPA submission also notes that the conditions attached to Environmental Protection Licence No. 13336 will appropriately regulate the short-term environmental or amenity impacts associated with the project.

Heritage Division (OEH)

The submission advises:

- that the Heritage Council has received two requests under the *Heritage Act 1977*: one for an Interim Heritage Order (IHO) and also a nomination for the HCT to be listed on the State Heritage Register;
- it contends that:
 - the assessment of heritage significance of the HCT does not accord with current practice noting that the Rts refers to the HCT as being best described as of 'regional' significance;
 - does not document the view of key stakeholders; and
 - incorrectly refers to the HCT as not being currently listed on any heritage register when the BDA and the Department is aware that the Heritage Council's State Heritage Register Committee resolved that an Interim Heritage Order (IHO) should be made to commence the statutory process to consider listing the item on the State Heritage Register under section 33 of the *Heritage Act 1977*.
- notes that the Minister for Heritage has determined not to make an IHO; and

- requests that the application not be determined until the current process to consider State Heritage listing for the HCT has been concluded (the Department notes that this has since been concluded by the Minister's decision not to list the HCT on the State Heritage Register).

National Trust of Australia (NSW)

The National Trust advises that the documentation provided in support of the application remains seriously flawed and insufficient to provide any basis for a decision to demolish the HCT. The revised HIS and the Options Assessment Report does not provide a reliable analysis of the subject heritage item or its conservation options.

The National Trust considers the Options Assessment Report to be inadequate in its assessment of the potential retention or adaptive re-use of the HCT and that the multi-criteria assessment is predicated upon an unreasonable limited set of factors. The National Trust also advises that the Options Assessment Report does not factor in current or potential revenue analysis (skewing the results towards demolition) and it does not identify a reasonable range of adaptive re-use options. On this basis, the National Trust advises that the following matters should have been considered in the Options Assessment Report:

- to utilise the HCT as a multi-use space in line with its capabilities; or
- to take the HCT to market in a sale or lease following a process to facilitate a new use.

The National Trust provides an assessment of the above two options using the same multi-criteria assessment and concludes that the two proposed adaptive re-use options proposed by the National Trust produce better outcomes than the demolition option.

In addition, the National Trust's analysis and review of the multi-criteria assessment concludes that many of the values assigned in that assessment are based upon poor or partial analysis of relevant factors or are underpinned by untenable assumptions. In this regard, the National Trust analysis ranks demolition last and ranks the adaptive re-use options as outperforming the demolition option.

The National Trust considers that retention as is does not preclude its future use and will allow the HCT to evolve in function as Barangaroo and Millers Point undergo fundamental change.

Heritage Council of NSW (Heritage Council)

On 10 September 2014, the State Heritage Committee of the Heritage Council considered potential listing of the HCT on the State Heritage Register. In summary, the Heritage Council resolved to:

- advise the Minister for Heritage that the HCT is of State heritage significance;
- to recommend to the Minister for Heritage that the HCT be listed on the State Heritage Register;
- give notice of its decision to persons notified under section 33(1)(a) of the *Heritage Act 1977*; and
- request that the Heritage Division commission a brief report on potential adaptive reuse of the item to be provided to the Minister with the Recommendation to List.

The Department notes that the Minister for Heritage has since considered this recommendation and has decided not to list the HCT on the State Heritage Register.

The issues raised in the above submissions to the RtS are considered in Section 5 of this report, as relevant. The Proponent's RTS and the submissions received in respect to the RTS are provided at **Appendix D** and **Appendix E** respectively.

5. ASSESSMENT

The Department considers the key issues associated with the proposed modification to be:

- heritage impacts;
- demolition methodology;
- environmental management;
- traffic, car parking and access; and
- compliance with the Barangaroo Concept Plan.

5.1 Heritage Impacts

Heritage Listing

The HCT was listed on the Sydney Ports Section 170 Heritage Register (Section 170 Heritage Register) between 2008 to 2012 until it was transferred to the Barangaroo Delivery Authority in July 2012. The Sydney Ports Corporation Heritage Inventory lists the HCT, then referred to as the Ports Operations and Communications Centre (POCC), as having State significance.

When assessed against the State Heritage Register (SHR) criteria, the POCC was identified on the Section 170 Heritage Register as meeting the following criteria:

- SHR Criteria a)- Historical Significance: The POCC is significant in the history and operation of the Port of Sydney.
- SHR Criteria c)- Aesthetic Significance: the POCC is a prominent landmark, and part of the skyline of Sydney Harbour. It is a significant element of the maritime landscape.

The Department is aware that a letter was sent from Sydney Ports Corporation in July 2012, notifying the then Heritage Branch of the Department of Planning of the transfer of the HCT to the Barangaroo Delivery Authority. The letter advised that Sydney Ports Corporation assessed the item as being of State significance in late 2006. Despite this notice, immediate steps were not taken to list the HCT on the State Heritage Register. Accordingly, the HCT is not currently listed on the State Heritage Register as a heritage item.

As stated above, MOD 3 to the Barangaroo Concept Plan, which was determined in 2009, removed the requirement to retain the HCT and flagged its potential future demolition. As a consequence of the subject application there has been increased (albeit limited) public interest in retaining the HCT. This includes a request from the National Trust of Australia (NSW) to the Heritage Council for an Interim Heritage Order and a nomination for listing on the State Heritage Register.

The nomination for listing of the HCT was publicly exhibited by the Heritage Division between 16 July 2014 and 14 August 2014.

The Heritage Division's assessment of significance in support of the heritage listing, states that the HCT has potential State significance as it satisfies the following SHR Criteria (as summarised):

- SHR Criteria a)- Historical significance;
- SHR Criteria b)- Associative Significance;
- SHR Criteria c)- Aesthetic Significance;
- SHR Criteria f)- Rarity; and
- SHR Criteria g)- Representative.

The proposed State Heritage Register Listing is provided in full at **Appendix G**.

The State Heritage Committee of the Heritage Council of NSW considered the potential listing of the HCT at its meeting on 10 September 2014. In summary, the Committee resolved to advise the Minister for Heritage that the HCT is of State heritage significance and to recommend that the Minister for Heritage direct the listing of the HCT on the State Heritage Register. The Heritage Council also resolved that a brief report on the potential adaptive re-use of the HCT be provided to the Minister for Heritage with the recommendation to list the item. A copy of this Options Report, prepared by Tonkin Zulaika Greer Architects, has been provided to the Department and is considered further below in this report. Subsequently, and at the request of the Minister for Heritage, the BDA submitted a response to the findings and conclusions in the Options Report.

As stated previously in this report, the Minister for Heritage has now considered the recommendation of the NSW Heritage Council to list the HCT on the State Heritage Register and did not support its listing.

Heritage Significance

In accordance with Statement of Commitment 59 of the Barangaroo Concept Plan approval, the modification application is supported by a comprehensive Statement of Heritage Impact prepared by Rintoul Associates. The amended version of the Statement of Heritage Impact (HIS) submitted with the Proponent's RTS has responded to concerns raised by the Heritage Branch and public submissions regarding the adequacy of the heritage assessment.

The HIS concludes that the HCT is of potential local significance and therefore that it does not warrant listing on the State Heritage Register. The HIS subsequently supports the demolition of the HCT. In reaching this conclusion, the HIS concludes as follows (as summarised):

- when assessed against the NSW heritage assessment criteria, the HCT is of moderate local significance, whilst its landmark quality from Darling Harbour and Walsh Bay is assessed as being of high local significance. On this basis, it is concluded that the HCT should not be listed on the State Heritage Register;
- the former Sydney Ports Corporation listing included the State themes of 'communication' and 'transport'. Both of these uses are now redundant which lessens their significance in the HCT's current situation and context (i.e. is no longer visibly associated with the former wharves and has consequently lost some of its maritime industrial context);
- the HCT has a negative impact upon the State significant Millers Point area and therefore its proposed removal will enhance and restore the heritage character and setting of Millers Point;

- the removal of the HCT will remove its negative visual impact upon the small scale houses and streets of Millers Point and will permit other historic structures to regain their landmark qualities. It will also restore iconic views to Walsh Bay, the Sydney Harbour Bridge and the Opera House and improve the prominence of other local landmarks; and
- it is economically difficult to adaptively re-use the HCT for any public use due to its specific design (i.e. small floor plate, structural constraints and the BCA/OH&S upgrades required to support any adaptive re-use).

Having regard to the above, the HIS further concludes that the proposal provides an opportunity to tell the story of two centuries of maritime history of Sydney Harbour through an Interpretation Strategy. It also acknowledges that whilst the removal of the HCT will result in the loss of part of the maritime infrastructure from the container phase of the working port of Sydney, the redevelopment of Barangaroo will retain other elements of the former roll-on/roll-off stevedoring wharves, which will be interpreted including:

- the 1960s sandstone cutting adjacent to Merriman Street;
- the Hungry Mile; and
- a substantial length of the East Darling Harbour container wharves (including caissons and mooring bollards).

As stated above, the modification application is supported by an Options Assessment Report prepared by Value Network Pty Ltd which considers a number potential uses for the HCT, including its retention 'as is' (Option 1), its adaptive re-use (Options 2a and 2b) and its removal (Option 3). The Options Assessment Report provides a qualitative and quantitative assessment of these options and includes a multi-criteria assessment (MCA) for each option against relevant criteria. The MCA includes design excellence, public amenity/enjoyment, heritage, value for money and sustainability. The financial analysis shows that Option 1 (retain as is) and Option 3 (demolish) are of a similar net present value cost (i.e. \$5.4m versus \$5.8m respectively). However, Option 3 (demolish) rates as a superior option based on its overall MCA score.

The Department has considered the Options Assessment Report in detail and the submissions received which suggest that the HCT should be retained and adaptively re-used due to its heritage significance. The Department is also mindful of the concerns raised in submissions in relation to the adequacy of the Options Assessment Report, which suggest that the MCA scores and conclusions have been weighted to favour the demolition of the HCT.

The suggestions of Council, the National Trust and the Heritage Council for the future adaptive re-use of the HCT for community and other purposes are noted. While it is apparent from the Department's review of these suggestions that the HCT may in theory be adaptively re-used for a limited range of uses subject to considerable costs, structural modifications and market viability, the feasibility of these suggestions have not been tested and whether they truly represent viable alternatives to the demolition of the HCT remains uncertain.

With the above in mind, the Department has fully considered the submissions received during the exhibition of the modification application and is cognisant of the opposing opinions in agency, Council and public submissions in relation to the significance of HCT. It is evident from this review that while the Minister for Heritage has not supported the HCT's listing on the State Heritage Register, the HCT does have some heritage significance and has made a contribution to Sydney's maritime history and that its visual prominence has resulted in it having landmark status.

However, the Department does not consider that this limited heritage significance should be the sole consideration in the determination of this application or is significant enough to warrant the refusal of the application. Other factors are equally important, and on balance, the Department supports the demolition of the HCT for the following reasons:

- it has not been listed as an item of State heritage significance;
- there are conflicting views about whether the HCT is of State heritage significance;
- the intrinsic architectural style and quality of design of the HCT is limited;
- the HCT, in isolation, is representative of only a limited period in the overall history of Sydney Harbour (i.e. 35 years of maritime history);
- the HCT is a prominent and detracting element in the landscape. While the HCT may be representative of a significant engineering structure of its time, its demolition will remove its visual dominance in the backdrop and foreground of key views of surrounding State heritage listed items, including the Sydney Harbour Bridge and Millers Point, and the World Heritage listed Sydney Opera House (**Figure 11** and **Figure 12**);
- the dominance of the HCT has an adverse heritage impact on the historic character and setting of Millers Point. Its demolition provides an opportunity to reverse this negative impact;
- the redevelopment of Barangaroo and specifically the Headland Park has changed the context for the HCT. In particular, the change in form of the headland to a naturalistic form coupled with changes in the profiling of the land and the significant landscaping installations will transform the appearance of the headland from its pre-development industrial maritime form. Therefore, the HCT's association with the former maritime use of the site is no longer as relevant and the redevelopment of the site provides an opportunity to meaningfully interpret the HCT in manner which more appropriately responds to the next phase in the redevelopment of the site;
- the benefits associated with the potential adaptive use of the HCT are indeterminate, and there are considerable structural and physical limitations to the future re-use of the HCT. The Department notes that a Structural Assessment Report prepared by the Robert Bird Group (December, 2012) identified that the design of the tower includes structural load limitations and that the structure sways some 15 cm in certain wind conditions. On this basis, it concluded that these factors, in addition to the need to upgrade the tower to meet current code of practice requirements, would pose significant constraints to any future proposal for the adaptive re-use of the tower structure. Therefore, in order to accommodate the adaptive re-use of the HCT, it is likely that the necessary works will substantially alter the physical appearance of the structure in order to

- fully address its inherent structural condition, to meet current building and standard requirements, and satisfy public access and safety requirements; and
- the demolition of the HCT will result in beneficial impacts which will enhance the Headland Park's integration with the future cultural space proposed below. As illustrated in **Figure 8** above, the construction of the oculus will provide an opportunity for natural light to project into the interior of the future cultural facility and for the adjacent cliff-face to feature as a key element in its design.



Figure 11: The HCT viewed from Sydney Harbour (Source: Sydney Ports Corporation Heritage Inventory)



Figure 12: View of the HCT from within Millers Point (Source: Rintoul Associates)

Archaeology

The modification application is supported by an Archaeological Assessment Report (AA Report) prepared by Austral Archaeology Pty Ltd. The AA Report provides an archaeological assessment of the likely impacts of the proposal on any Aboriginal cultural heritage, European cultural heritage and other archaeological items, and outlines proposed mitigation and conservation measures. The methodology in the AA Report includes a review of historic development of the site and the results of a site inspection to examine the HCT, its method of construction and physical layout. The AA Report also addresses the significance of any potential archaeological resource(s) in accordance with the criteria adopted in the Heritage Council's significance guidelines for archaeological deposits.

The AA Report found that the site of the HCT has been the subject of considerable disturbance and excavation in the 1960s and 1970s mainly relating to maritime projects, including the construction of the HCT and associated maritime improvements in Millers Point. As illustrated in **Figure 13**, the HCT is founded in bedrock and on this basis the AA Report advises that any archaeology would have been removed during its construction to a significant depth through to the bedrock. Due to the highly disturbed and excavated nature of the site, the AA Report concluded that the site has no archaeological significance and that the impact zone beneath the tower and its associated infrastructure at its base has no archaeological potential. In the event that below-ground level works are undertaken at the entrance to the site in Merriman Street, the AA Report recommended that the works be monitored by a suitably qualified archaeologist.

The Department accepts the conclusion of the AA Report and in particular, that the low archaeological potential of the site does not pose a significant constraint to the demolition of the HCT. The Department notes that existing Condition D2 of the

project approval for the Headland Park covers monitoring, unexpected relic discovery and legislated procedural requirements in the event of an unexpected archaeological discovery during works on the site. This condition would relevantly apply to the HCT demolition. As recommended in the AA Report, a new condition is recommended to specifically address any new excavation works adjacent to the Merriman Street entrance of the site and the requirement for these works to be suitably monitored.



Figure 13: The base of the HCT showing the associated bedrock excavation prior the Headland Park works commencing in 2010. (Source Austral Archaeology)

Interpretation

The modification application proposes the construction of an interpretative structure referred to as an 'oculus' on the site of the HCT. The oculus is designed to interpret the location and footprint of the HCT and to allow a beam of light to move across the interior space connecting to the future cultural space and to expose the existing carved rockface (refer **Figures 8** and **13**). A 1.2 metre pathway is proposed to be constructed around the perimeter of the oculus to provide an opportunity for the interpretation of the HCT and Sydney's broader maritime history.

The application is supported by an Interpretation Strategy prepared by Rintoul Associates. The major interpretation themes in the Interpretation Strategy are identified as:

- the story of the Port of Sydney: the evolving maritime technology over the 200 years related to shipping, wharves, cargoes, cargo-handling and maritime communication in which the HCT played a role, although now redundant;
- the massive landform changes which occurred at Millers Point to accommodate changes in shipping technology;
- historic built form which was affected by the massive land form changes; and

- the associated labour, workers' housing and social movements which were integrally linked to the maritime activities of Millers Point.

The Interpretation Strategy includes consideration of potential interpretative sites and devices to convey and promote the major interpretation themes identified above. In addition, it establishes the process for the preparation of an Interpretation Plan, including the requirement for consultation with key stakeholders and for design development. The Department concurs with the key recommendations of the Interpretation Strategy and has recommended that the Interpretation Plan be submitted to the Secretary for approval to ensure that the final interpretation design appropriately addresses the major interpretative themes identified above.

The Department notes that the addendum to the Heritage Impact Statement prepared by Conybeare Morrison and submitted with the Preferred Project Report for MP 06_0062 MOD 3 concluded that if the tower is to be demolished, then the base of the tower could be used for the purpose of interpretation. The Department notes that this approach would also be consistent with the recommendation made by Council in the event that the HCT is demolished. However, as detailed in **Section 2** of this report, there are practical and structural constraints (i.e. design integration, BCA constraints and significant costs) which inhibit the retention the HCT. Furthermore, it is questionable whether there are any benefits in retaining a small portion of the structure below the Merriman Street level when it is the tower element of the structure (if any) which is of most significance and denotes the iconic nature of the HCT. For these reasons, the Department does not support the partial retention of the HCT. The Department is satisfied that the oculus and associated landscape works will provide an appropriate mechanism to interpret the HCT and the maritime history of Sydney Harbour and will also better integrate with the landscape setting of the Headland Park. Moreover, the Interpretative Strategy will sufficiently offset the full demolition of the structure.

Council has also suggested that the area around the base of the HCT should be landscaped and trafficable and that the curved section of the carved rockface around the tower could remain fully exposed, maintaining a lower entry to the tower. The proposed design would allow for exposure of the carved rockface (cliff-face) and as identified in the Interpretation Strategy, for the changes to the landform to be meaningfully interpreted. This is considered to be a positive element of the proposal. As the current modification application does not deal with the internal design of the cultural space at this point in time, it is unknown how public access to this area will be achieved. Although, it is evident from the architectural plans submitted with the modification application (refer **Figure 6** and **Appendix B**) that public access to this area is contemplated and will be addressed in the future application for the cultural facility.

Given the above, the demolition of the HCT is supported, subject to specific conditions to address archival recording, heritage interpretation and environmental management. In particular, the Department is satisfied that the significance of the structure can be appropriately represented in the archival recording prior to its demolition. This approach would also be consistent with the approved Statement of Commitment 62 (archival recording) which forms part of the Barangaroo Concept Plan approval. The Department has recommended a condition to address this

requirement and for the archival recording to be submitted to the Department, the City of Sydney Archives and the State Library of NSW prior to the commencement of works. Additionally, the Department is satisfied that the heritage impacts associated with the demolition of the HCT can be suitably offset by the installation of the comprehensive Interpretative Strategy which allows for greater public engagement and appreciation of the broader history of Millers Point, as well as Sydney's maritime history.

5.2 Demolition Methodology

The application includes an assessment of a number of alternative demolition methods in relation to the current works program for the construction of the Headland Park in order to minimise risk and disruption to neighbouring sites given the location of the HCT. The methods considered in the Demolition Review Report (DR Report) prepared by Evans & Peak include induced collapse, structural demolition and structural dismantling.

The DR Report concludes that the structural dismantling of the HCT is the preferred option given the location and height of the HCT (i.e. which achieves a height some 70 metres above the Merriman Street level) and given the HCT is not designed to support a full scaffolding enclosure used during typical high rise demolition projects. This methodology would allow the HCT to be structurally dismantled in small sections and for a tower crane to be used to lower the elements to the ground for removal. A review of the structural and design information has also determined that the optimal location for the tower crane is in Merriman Street.

In order to structurally dismantle the HCT, five stages are proposed as follows:

- stage 1: site establishment: includes establishment of the work area, erection of a tower crane (Merriman Street) and installation of perimeter screens and scaffolding;
- stage 2: lifting and access equipment: establishment of crane and truck loading locations, isolation zones for loading of material into disposal truck and associated work zones, road closures and traffic management controls;
- stage 3a: working level removal and roof removal;
- stage 3b: working level removal and floor and upper core removal;
- stage 4: concrete tower and core removal; and
- stage 5: concrete tower base removal.

The Department concludes that the structural dismantling of the HCT is an appropriate demolition strategy having regard to the findings of the DR Report. Furthermore, the Department is satisfied that relevant management and contingency measures can be put in place to control on and off-site risks associated with the demolition and that this will ensure that any public safety and environmental concerns are satisfactorily addressed. The Department notes that WorkCover is also supportive of this strategy, subject to all works being undertaken by a suitably qualified demolition contractor in accordance with an approved Demolition Work Plan. The Department has recommended conditions to suitably address the requirements of WorkCover in this regard.

The Department also notes that existing conditions of the approval relevantly cover the requirements for the proponent to obtain a Footpath Damage Bank Guarantee

(B7) and to obtain approval from Council under section 138 of the *Roads Act 1993* to erect the required hoardings, scaffolding and/or a barricade in a public place (Conditions B28 and B31). Notwithstanding this, a new condition has been recommended to ensure that suitable measures are in place to protect the intact stone kerbs and gutters on the eastern side of Merriman Street and for the gutters to be maintained in sound condition for the full term of the works.

The Department also notes that the demolition methodology for the site has identified that groundwater inflow may occur during the demolition of the base of the HCT. The methodology proposes to pump the water into a holding tank and discharge the water to a stormwater drain. Existing advisory note AN2 (temporary dewatering) attached to the project approval addresses the legislation requirements under the *Water Act 1912*. The Department is satisfied that this advisory note adequately addresses the requirement for consultation with the Office of Water in the event that groundwater is intercepted/encountered during the works.

5.3 Environmental Management

As outlined in Section 5.2, the application proposes the structural dismantling of the HCT in five stages. The key environmental impacts likely to result from the structural dismantling or demolition of the HCT have been identified as noise generation, air quality and asbestos management. These impacts are addressed below and where required specific conditions have been recommended to ensure that potential impacts can be relevantly addressed through appropriate management and mitigation measures. In addition, the Department notes that general construction management is adequately addressed by existing conditions of the Headland Park approval namely, the requirement for the preparation of the construction environmental management plan (Condition B20), a waste management plan (Condition B21) and demolition work method statement (Condition D6).

The Department also considers that stormwater management (Condition B23) and the requirement to prepare a construction framework environmental management plan (Condition B20), which includes a requirement for the CFEMP to be updated to include any revised sub-environmental management plans for the project approval, are sufficient to manage the general environmental impacts associated with the proposed modifications. Additional requirements in relation to potential air quality, asbestos management and noise impacts are addressed separately below.

Air Quality Impacts and Management

It is anticipated that air quality impacts will result from the decommissioning and demolition of the HCT, including dust and odour generation. Under the terms of the current approval, Condition B24 requires the preparation of an air quality management plan in consultation with the EPA, including detailed management practices to be implemented for all dust and VOC/odour sources at the site. In addition, the air quality management plan is to include a monitoring program and management strategies to ensure amongst other things, that the proposed emission controls are sufficient to ensure no exceedences of EPA's impact assessment criteria.

Air quality is also managed on the site in accordance with the current Environmental Protection Licence No. 13336 (EPL) issued by the EPA, which also includes the following:

- a requirement for monitoring (including real time particulate monitoring and establishment of PM10 monitoring sites);
- the implementation of reactive management strategies (including hourly review of real-time monitoring data and monitoring trigger levels and appropriate trigger actions to prevent exceedances of air quality criteria); and
- on-site meteorological weather stations (including requirement for site inspections when wind speeds exceed nominated criteria).

Having regard to the above, it is evident that air quality impacts resulting from construction work in the Headland Park is appropriately controlled and regulated under the current approval and the EPL. However, given the nature of the current application, a project specific air quality management plan (AQMP) has been prepared.

The AQMP includes specific management measures to ensure that the demolition of the HCT will result in minimal potential air quality impacts and risks. As detailed in Section 4 above, a revised AQMP was submitted with the Proponent's RTS to respond to comments raised by the EPA in relation to air emissions and asbestos management. The EPA has subsequently advised that the revised AQMP has satisfactorily addressed its prior concerns (with the exception of asbestos management- refer further discussion below) and that the current EPL will regulate many of the short-term environmental and amenity impacts associated with the project.

The Department notes that the revised AQMP recommends the following additional monitoring conditions:

- that an additional dust deposition monitoring location be established near the HCT for the duration of the demolition works; and
- the respirable fibre monitoring program be extended to cover all works associated with the handling of asbestos during the demolition of the HCT.

Subject to this additional monitoring being undertaken and the AQMP being updated to address the requirements of the EPA, the Department concludes that potential impacts to air quality as a result of the proposal will meet the relevant standards and can be satisfactorily monitored and managed.

Asbestos Management

A 2006 Hazardous Materials Audit (2006 Audit) undertaken by Noel Arnold and Associated on behalf of Sydney Ports Corporation identified the presence of asbestos containing materials in the HCT. An asbestos management plan (AMP) has been submitted with the Proponent's RTS and specifically addresses the management, handling and disposal of asbestos related to the demolition of the HCT.

The EPA has reviewed the AMP and has requested that it be amended to clarify the work requirements and contingencies that will be implemented in the event that friable asbestos materials are encountered in the demolition of the HCT. The

Department has also identified that the AMP does not specifically address the handling and management of asbestos identified in the 2006 Audit and furthermore that its management has not specifically been tailored to address the demolition methodology (i.e. structural dismantling of the HCT). Accordingly, the Department has recommended relevant conditions to address these requirements and furthermore for the final AMP and an Asbestos Removal Control Plan be prepared in consultation with the EPA and approved by the Secretary prior to the commencement of any works.

Subject to compliance with these conditions and the implementation of the respirable fibre monitoring program (as detailed above), the Department is satisfied that the demolition of the HCT can be suitably managed to minimise any potential harm to workers and neighbouring properties.

The Department notes that current Condition D6 (demolition, excavation and construction management) includes specific requirement for demolition and or excavation works in relation to materials handling, asbestos and hazardous materials clearance certification, and Work Cover Authority requirements to be incorporated into the demolition Work Method Statement and Waste Management Plan. These requirements remain relevant to the HCT demolition and a condition has been recommended in this regard to require that the demolition of the HCT specifically comply with the terms of Condition D6.

Noise Impacts and Management

The existing approval (Condition B22) requires the preparation and implementation of a construction noise and vibration management plan. Amongst other things, this condition also includes the following:

- restrictions on construction work at the site to standard construction hours unless inaudible at any residential premises and subject to separate approval of the Police or Secretary, as specified in the condition;
- implementation of reasonable and feasible noise mitigation and management measures to achieve compliance with the construction noise management levels derived in accordance with the EPA Interim Construction Noise Guidelines; and
- a requirement for vibration caused by construction to comply with the EPA publication "*Environmental Noise Management- Assessing Vibration: a technical guideline*".

In addition to the above, Condition D1 (noise and vibration) requires that the proponent monitor noise levels at the most affected receiver during rock hammering sawing and breaking and other noisy activities. If noise levels exceed LAeq, (15 minutes) 70dB(A) for 12 consecutive fifteen minute periods (3 hours) within the approved hours of work, the Proponent must incorporate respite periods of 1 hour per every 3 hours.

Given the nature of the current modification application, a specific demolition noise and vibration management assessment (DNVMA) has been prepared by Acoustic Logic. Based on the proposed demolition methodology of structurally dismantling the HCT and the equipment required for each stage of demolition, the DNVMA has predicted the likely noise levels at key residential receivers including along Merriman Street, Bettington Street, Dalgety Road, Towns Place, Windmill Street, High Street at

Millers Point and Weston Street at Balmain. Noise levels are also predicted for the nearest commercial receivers at Universal Studio Australia and Moores Wharf. DNVA adopts the noise management goals and background noise levels undertaken for the initial project (MP 10_0048).

The assessment concludes that residential receivers along Merriman Street and Bettington Street, due to their proximity to the HCT, will be the most affected receivers with the noise levels predicted to exceed the noise management goals for the development. The results are summarised in **Table 1** below. Minor exceedences are also predicted along Dalgety Road. It is also predicted that cumulative noise impacts will result in 0-3dB(A) increase in the vicinity of the site.

As detailed in Table 1, the noise levels resulting from Stage 1 and Stage 2 works are also predicted to exceed the 'highly noise affected' management level of 75dB(A) established by the EPA. In order to minimise potential noise impacts to surrounding development, the DNVMA recommends that these works be undertaken in accordance with the preliminary noise and vibration management plan which has been prepared for the proposal and which includes general and specific noise control and mitigation measures.

Table 1: Summary of Predicted Noise Levels- Residential Receivers along Merriman & Bettington Streets

Equipment	Predicted Noise level at Receiver dB(A) L_{eq} (15 mins)	Cumulative Noise Level at Receiver dB(A) L_{eq} (15 mins)	Noise Affected Management Level dB(A) L_{eq} (15 mins)
Stages 1 and 2- Site Establishment			
Mobile Crane	57-82	64-89	54
Anchor Drill	64-89		
Portable Hand tools	55-80		
Stage 3- Working Level Removal			
Wire Saw	52-57	56-76	54
Hydraulic Saw	58-63		
Tower Crane	56-61		
Access Equipment	43-48		
Portable hand tool	53-58		
Truck	51-76		
Stage 4- Concrete Tower/Core Removal			
Wire Saw	53-69	60-76	54
Hydraulic Saw	59-75		
Tower Crane	56-61		
Access Equipment	44-60		
Portable hand tools & core drill	54-70		
Truck	51-76		

The EPA advised in its submission, that predicted noise associated with the demolition of the HCT can be suitably managed under the requirements of existing Condition B22 and the EPL. Notwithstanding this, the Department acknowledges that

the predicted exceedances of the noise management levels are high, albeit limited to certain (and not continuous) activities associated with the demolition of the HCT. While the current terms of Condition B22 are accepted as being appropriate for the project, the Department recommends that a new condition be imposed which requires that an updated construction noise and vibration management plan (NVMP) be prepared in consultation with the EPA and that it specifically addresses the following matters:

- suitable real-time noise monitoring program, an early warning system and reactive management procedures to ensure corrective actions are implemented prior to exceedances of the relevant construction noise criteria; and
- community consultation, including community liaison (e.g. early notification procedures), complaints management and a response mechanism for critical stages of the works.

Further to the above, the amended NVMP will need to demonstrate compliance with the EPA's *Interim Construction Noise Guideline* and the noise management levels and highly affected noise management levels established for this site. Subject to compliance with the terms of this new condition, the Department recommends that works to demolish the HCT not commence until a regime for monitoring and noise mitigation measures are developed for the project to the satisfaction of the EPA.

5.4 Traffic, Car Parking and Access

Traffic

The traffic related construction impacts resulting from the proposal are likely to be minimal in terms of traffic generation. In this regard, the Traffic Impact Assessment prepared by GTA consultants predicts that the average number of vehicle movements per day associated with the demolition of the HCT will be eight, with a maximum of ten movements expected during the peak demolition period. Subject to the implementation of the traffic management measures contained in the TIA, including the installation of advisory road signage and the road traffic controllers for the term of the works, the Department is satisfied that the volume of construction traffic generated will have minimal impact on the local traffic network and raises no objection to this aspect of the application.

Car parking and access

The most significant traffic impact resulting from the proposal will be associated with the proposed closure of Merriman Street and part of Bettington Street for the full term of the construction period (i.e. the estimated 8-month period). This is required to establish the work and safety zones and the tower crane. These road closures are required for all five stages of the construction program and will result in the loss of some 20 on-street parking spaces, including the parallel kerbside parking spaces which are used by local residents in Merriman Street and Bettington Street. The typical extent of the road closure is illustrated in **Figure 14** below.

The Department notes that despite the construction program resulting in the loss of some 20 on-street parking spaces, no submissions of objection were received from these residents in relation to the public exhibition of the modification application. It is also noted that Council did not object to the proposed road closure and loss of on-street parking.

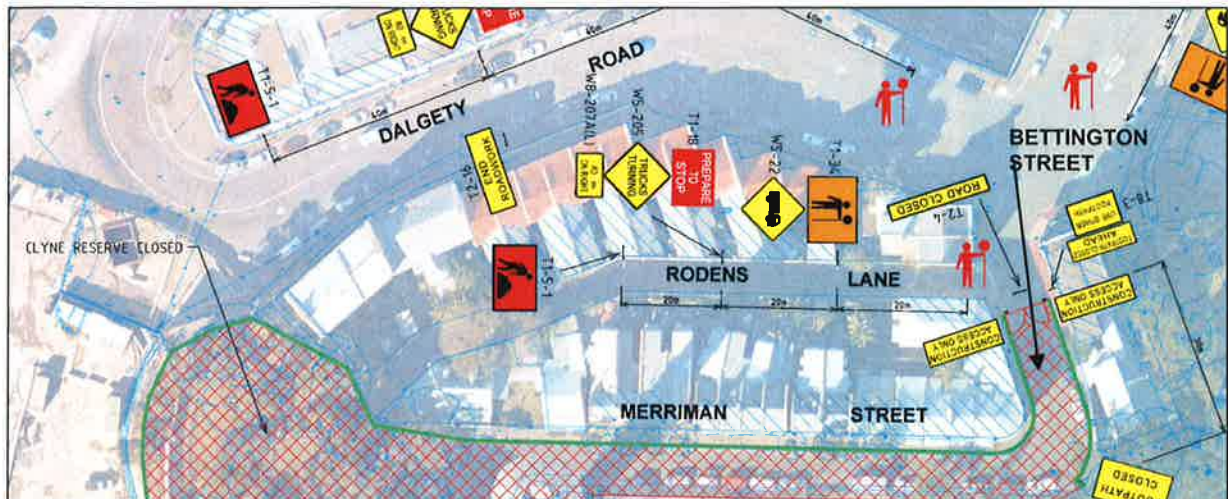


Figure 14: Proposed road closures (red-hatching) associated with the demolition of the HCT.

The TIA advises that there is sufficient on-street parking capacity in surrounding streets, typically outside the weekend evening period. This includes parking in Dalgety Road, Argyle Street and Towns Place for residents who benefit from a resident parking permit. In order to address the loss of on-street parking, the TIA suggests that temporary parking could be accommodated in Munns Reserve prior to the completion of the Barangaroo Integration Works. However, the BDA has recently advised that commencement of the Integration Works is imminent and that the use of Munns Reserve for parking is unlikely.

The Department notes that the Barangaroo Integration Works comprise a range of public domain improvements to be undertaken by the BDA and the Council. The works proposed for Argyle Place, Munn Reserve, Dalgety Road and Towns Place include wider footpaths, improved cycle ways, better lighting and more street trees, as well as improved seating and landscaping in Munn Reserve.

The Department is cognisant of the need to ensure a safe work zone around the site for the duration of the demolition period and that this will inconvenience local residents for a considerable period of time. However, given the location of the HCT, its demolition can only be undertaken through the closure of Merriman Street, Bettington Street and the partial closure of Clyne Reserve. The extent of these closures will need to be determined and approved by the City of Sydney Council's Sydney Traffic Committee.

Having regard to the significant nature of these impacts, the Department has recommended that a traffic management plan be prepared in consultation with the RMS, TfNSW, the Council and local residents, and that it provides a solution to the provision of temporary resident parking nearby. Conditions are also recommended to require the Proponent to obtain a mobile crane permit and to consult with Sydney Buses regarding any changes to local bus services as a result of the road closures and for approval to be obtained from the Sydney Traffic Committee for the proposed road closures. Subject to these conditions being satisfactorily resolved prior to the commencement of works, the Department supports this aspect of the proposal.

5.5 Compliance with the Concept Plan

The Barangaroo Concept Plan (MP06_0162) is discussed in Section 1.2 and a summary of the Concept Plan approval and subsequent modification applications is provided at **Appendix F** of this report. As documented, MP 06_0162 MOD 3 includes in principle agreement for the demolition of the HCT, subject to a heritage impact assessment being undertaken at the relevant future application stage. The current modification application (MP 10_0048 MOD 4) seeks to resolve this deferred aspect of the Headland Park design.

In addition, the Department notes that the modification application is also consistent with the following Statement of Commitments (SoC) which form part of the Barangaroo Concept Plan approval (MP06_0162 MOD 3):

- SoC 50 & SoC 51 (Views to Millers Point Conservation Area): the application is supported by a visual impact assessment which demonstrates that the removal of the HCT will enhance views to and from Millers Point and to and from key strategic locations around Sydney Harbour. Refer to discussion in section 5.1 below.
- SoC 60 (Archaeology): the application is supported by an Archaeological Assessment Report. Refer to discussion in Section 5.1.
- SoC 61 (Interpretation): the application proposes the construction of an oculus and is supported by an Interpretation Strategy which includes appropriate implementation and management guidelines for the development of an Interpretation Plan for the HCT and the broader Barangaroo site. Refer to discussion in Section 5.1.
- SoC 62 (Archival Recording): a condition can be imposed to include a requirement to archivally record the HCT prior to its demolition. Refer to further discussion in Section 5.1.

Having regard to the above, the Department concludes that the subject modification application is consistent with the Barangaroo Concept Plan (as amended).

6. CONCLUSION

The Department has assessed the merits of the proposal carefully taking into consideration the issues raised in public and agency submissions.

While the Department acknowledges the differing points of view in respect to the heritage significance of the HCT, the Department notes that the Minister for Heritage has decided not to list the HCT on the State Heritage Register, and the previous working maritime context of the site has been altered by the construction of the Headland Park and Barangaroo in general. Significant structural and physical limitations for its adaptive re-use and substantial financial costs required to address building compliance and public safety issues provide further justification for the demolition of the HCT.

The Department's assessment further concludes that the installation of the comprehensive Interpretative Strategy which allows for greater public engagement and appreciation of the broader history of Millers Point, as well as Sydney's maritime

history will ensure the heritage value of the HCT is appropriately remembered and recognised.

In addition to existing conditions, the Department has recommended a number of conditions to address potential environmental impacts resulting from the demolition of the HCT, including construction management, asbestos handling and management, air quality and noise and traffic impacts. Subject to compliance with these conditions, the Department is satisfied that suitable monitoring, management and mitigation measures can be employed to ensure an acceptable level of environmental performance during the demolition and construction stages.

The Department concludes that the demolition of the HCT is in the public interest and should be approved, subject to recommended conditions.


7. RECOMMENDATION

It is recommended that the Minister:

- (a) **consider** the findings and recommendations of this report;
- (b) **determine** that the proposed modification falls within the scope of section 75W of the EP&A Act;
- (c) **approve** the modification under section 75W of the EP&A Act; and
- (d) **sign** the attached Instrument of Modification.

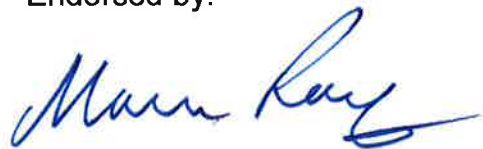
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Endorsed by:

 28/7/15

Daniel Keary
Acting Executive Director
Industry and Infrastructure Assessments

Endorsed by:



Marcus Ray
Deputy Secretary
Planning Services

28/07/2015

Approved by:

 30-7-15

Robert Stokes
Minister for Planning