

MODIFICATION REQUEST:

***Headland Park and Northern Cove
Main Works MP10_0048 (MOD 8)-
Modification to methodology for the
demolition of the Harbour Control Tower***



Secretary's Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

May 2016

1. BACKGROUND

1.1 Introduction

This report provides an assessment of a section 75W modification application, lodged by the Barangaroo Delivery Authority (BDA), seeking to modify project approval MP10_0048 for the Barangaroo Headland Park and Northern Cove main works.

The application (MOD 8) seeks approval to change the methodology for the demolition and removal of the Harbour Control Tower at Barangaroo.

1.2 The Site

Barangaroo is located on the north-western edge of the Sydney CBD. The site is bounded by the Sydney Harbour foreshore to the west and north, Hickson Road and Millers Point to the east and King Street Wharf/Cockle Bay/Darling Harbour to the south. Barangaroo has a site area of 22 hectares and a 1.4 kilometre harbour foreshore frontage.

Sydney Harbour is located immediately north and west of the site and Hickson Road runs along the eastern edge of the site. Further to the east above Hickson Road is the historic Millers Point precinct.

Figure 1 below illustrates the location of the Headland Park and the Northern Cove in the context of the entire Barangaroo site, including the location of the Harbour Control Tower (HCT).

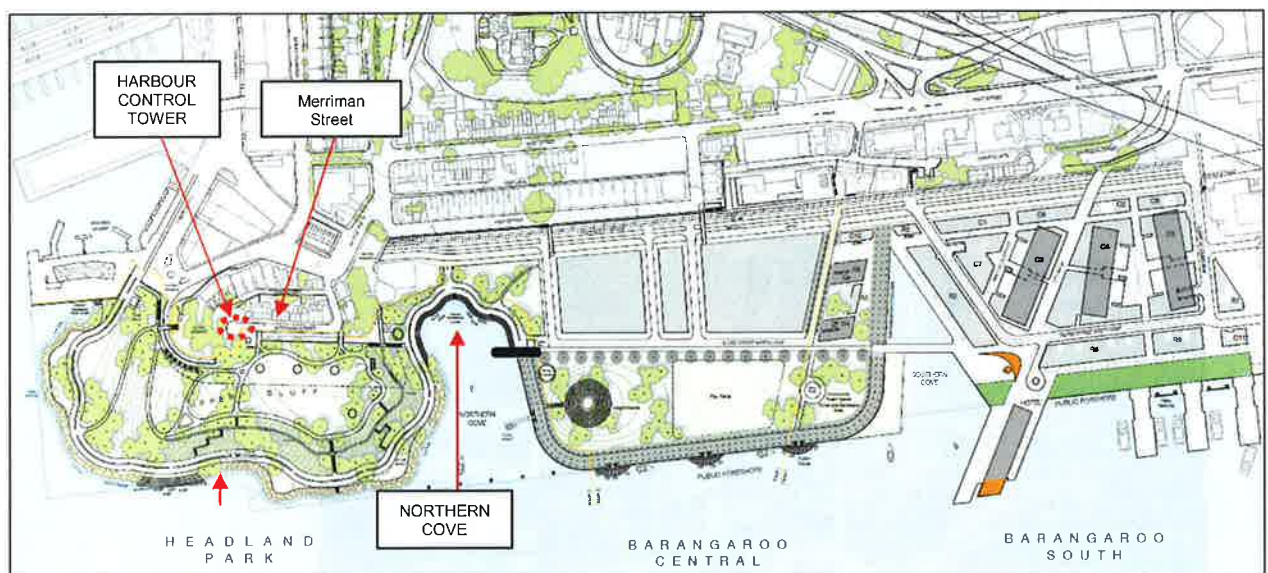


Figure 1: Headland Park, Northern Cove, Barangaroo Central and South

1.3 Approval History

Headland Park and Northern Cove Main Works

The project application (MP10_0048) for the Headland Park and Northern Cove Main Works was approved by the then Minister for Planning on the 3 March 2011 and permitted the following works:

- land formation;
- construction of retaining walls utilising sandstone based materials;
- creation of a naturalistic shoreline and northern cove through excavation and formation of sandstone retaining walls;
- general landscaping and planting;
- construction of a shoreline promenade;

1.4 The Harbour Control Tower

The HCT was designed in 1971 by Edwards Madigan Torzillo and Briggs. It is constructed to a height of 87 metres above sea level in order to achieve uninterrupted visual surveillance of shipping operations in Sydney Harbour.

The HCT was operational for a 35-year period between 1974 and 2009, although it was only fully operational between 1992 and 2009. The HCT played a significant role in port operations, as well as control over shipping operations in Sydney Harbour, after which time its surveillance and control functions were transferred to the Operational Centre in Port Botany. The tower is currently unused.

The HCT is shown in **Figure 3** and **Figure 4** below. It comprises a reinforced concrete tube which has an outer diameter of 4.9 metres, with the upper most portion of the structure comprising three levels of facilities, including an amenities level, equipment level and control level, and an upper most roof top platform. The outer diameter of the upper three floors is approximately 10.1 metres.

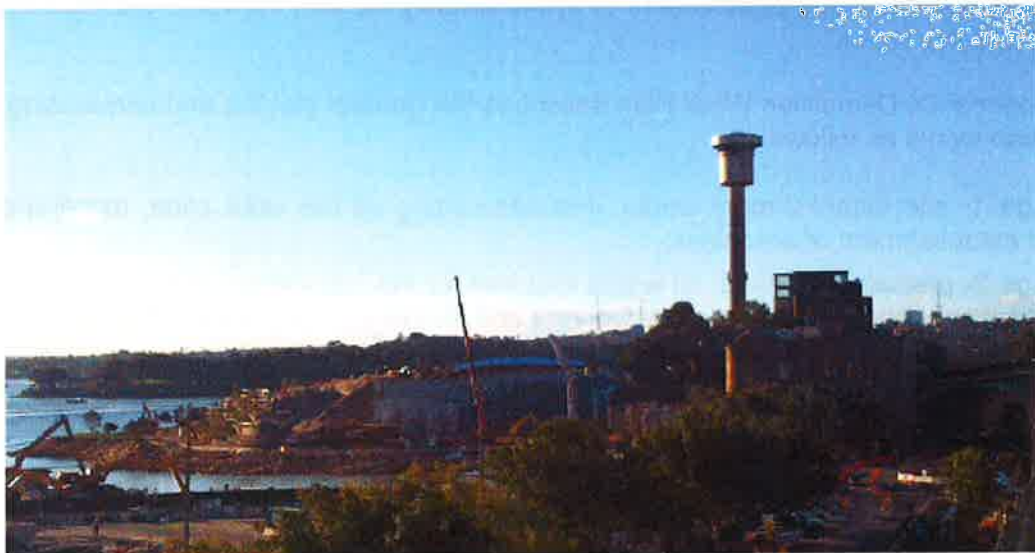


Figure 3: HCT viewed from High Street, Millers Point, looking north-west.



Figure 4: HCT viewed from the corner of Merriman & Bettington Streets, Millers Point

site establishment works. In this regard, the modified proposal will significantly reduce the period/s required for road closures and consequently, impacts to local residents in terms of loss of parking and restricted access. The demolition program is estimated to be reduced from approximately 8 months to 6 ½ months as result of the modified methodology.

In addition to the above, the modification application seeks approval to extend the approved working hours on Saturday from 8 am to 3 pm to 8 am to 5 pm.

A copy of the modification application is provided at **Appendix B** to this report.

2.2 Justification for Modification

The Barangaroo Delivery Authority (BDA) is progressing towards the commencement of the demolition of the Harbour Control Tower. BDA has advised that the request to modify the demolition methodology is justified given it will result in a reduction in the environmental impacts associated with the project (including noise, air pollution and traffic impacts) and in addition, it will reduce the closed-off area of Barangaroo Reserve and the surrounding road network during the demolition works.

3. STATUTORY CONTEXT

3.1 Continuing Operation of Part 3A to Modify Project Approvals

In accordance with clause 3 of Schedule 6A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), section 75W as in force immediately before its repeal on 1 October 2011, and as modified by Schedule 6A, continues to apply to transitional Part 3A projects.

Consequently, this report has been prepared in accordance with the requirements of Part 3A and the associated regulations, and the Minister (or delegate) may approve or disapprove the modifications under section 75W of the EP&A Act.

3.2 Modification of the Minister's Approval

Section 75W(2) of the EP&A Act provides that a Proponent may request the Minister to modify the Minister's approval for a project. As the proposed modification seeks to alter approved conditions, the modification requires the Minister's approval.

The Department is satisfied that the proposed modifications are within the scope of section 75W of the EP&A Act and do not constitute a new application.

3.3 Secretary's Environmental Assessment Requirements

Section 75W(3) of the EP&A Act provides the Secretary with scope to issue Environmental Assessment Requirements (SEARs) that must be complied with before the matter will be considered by the Minister. SEARs were not issued for this modification as the Department did not consider that further environmental assessment is required to support the modification request.

3.4 Delegated Authority

Under the Instrument of Delegation dated 16 February 2015, the Minister's function to determine modification requests under section 75W of the EP&A Act has been delegated to the Director, Key Sites Assessments where:

- the relevant local council has not made an objection; and
- a political disclosure statement has not been made; and
- there are less than 10 public submissions in the nature of objections.

As City of Sydney Council did not object, a political donation disclosure has not been made, and no public submissions were received, the Director, Key Sites Assessments may determine the modification request under delegated authority.

published on the Proponent's website.

Noise and Vibration

- Insufficient justification has been provided for the proposed extension of construction hours on Saturday. Additional evidenced based justification having regard to the provision of the *Interim Construction Noise Guidelines* (ICNG) should be provided, including to demonstrate the support of the community where noise is more than 5dB above affected levels.
- The noise rating background levels adopted in the *Deconstruction Works Noise and Vibration Assessment* (NVA) should be amended to comply with the ICNG (ie. Rating background level plus 5dBA, not plus 10dBA should apply).
- If the 'highly noise affected' management levels in the ICNG are exceeded, the Proponent should implement respite periods as described in the ICNG.
- The result of the noise and vibration monitoring should be published on the Proponent's website.

Stormwater and wastewater management

- The EPA has recommended that the WMP be amended to address the following matters be addressed:
 - evidence based, full compositional analysis of projected wastewater and stormwater runoff;
 - details of a sampling regime tailored to the compositional analysis;
 - details of where the pumping of stormwater and wastewater will be undertaken, how often the pumping will be undertaken, and how the pumping will be managed during rainfall periods to ensure that no water deemed to be below the defined 'acceptable standard' is discharged to Darling Harbour;
 - full details of how the Proponent will determine in real-time (i.e. not simply relying on the projected compositional analysis) whether contaminants are present in the wastewater/stormwater stream;
 - specific actions to respond to any exceedences of trigger values for all potential pollutants that may be discharged in surface water;
 - details of how the Proponent will ensure that no pollutants, including concrete dust, will be discharged to Darling Harbour, noting that gross pollutant traps and geofabric are unlikely to provide the required level of environmental protection; and
 - the sampling of all waste water streams being discharged from the demolition works being undertaken daily, where feasible and the results published on the Proponent's website.

Asbestos Management

- The *HCT Demolition Asbestos Removal Management and Control Plan (ARM&CP)* lacks sufficient detail and should be amended to address the following matters:
 - the response mechanism to manage possible friable asbestos impacted material;
 - requirements for working with non-friable materials associated with excavation works and transport of impacted materials and validation sampling following these works; and
 - include an inspection regime to sufficiently identify any remnant asbestos issues below the footprint of the HCT demolition.
- The EPA has also recommended that:
 - relevant justification should be provided as to why the asbestos fibre monitoring locations have been reduced from 4 to 3; and
 - site certification be prepared by a certified asbestos assessor and submitted to the EPA prior to the commencement of construction confirming that all asbestos has been removed from the HCT.

Waste Management

- The Waste Management Plan and the Asbestos Management Plan should be amended to confirm how the Proponent will ensure the requirements of the *WasteLocate* program are met, including reporting requirements for facilities receiving asbestos waste from the works.

Air Quality

- The Air Quality Management Plan (AQMP) should be updated to refer to the

- (including live and lead loads);
 - how the lift/stairs will be demolished to create the demolition chute; and
 - where the operators of the two demolition robots will be positioned during the work.
- In addition to the above, SafeWork NSW has also raised the following matters:
 - the general demolition techniques and the proposed demolition methodology in the Demolition Work Plan should be revised to be consistent;
 - a Blast Management Plan for the demolition of the core footings of the tower should be submitted SafeWork NSW for review by the Specialist Services Group;
 - the noise from pulverising concrete (and hammering, if pulverising is not effective) will result in noise exceedences; and
 - the use of mobile cranes on the site should be clarified, including to confirm whether a mobile crane will be used to remove heavy plant items.

<i>Response to Submissions</i>	<p>SafeWork NSW has advised that it has no objection to the proposed methodology as detailed in the modified application and has provided the following final comments:</p> <ul style="list-style-type: none"> • asbestos is to be removed and clearance certificates provided prior to undertaking demolition; • the XL platform design needs to include the concentrated loads and impact factors for the excavators. If there are limitations on the positioning of excavators, this needs to be clearly communicated to workers and monitored; • the park in Clyne Reserve should be closed to prevent placing persons at risk of injury around the demolition site in particular, from falling objects and movement of plant; and • A Blast Management Plan should be prepared and details submitted to SafeWork NSW if explosives are to be used for the core footing section of the HCT.
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4.2 Response to Submissions

The Proponent provided a Response to Submissions (RtS) on 4 April 2016 (**Appendix D**). The RtS provides further documentation in response to the key issues raised during consultation, as outlined in **Table 1** above, including to provide the following updated management plans and associated documents:

- Demolition Work Plan;
- Air Quality Management Plan;
- Waste Management Plan;
- Traffic Management Plan; and
- Deconstruction Works Noise and Vibration Assessment (including Deconstruction Works Noise and Vibration Management Plan).

In addition to the above, the RtS is accompanied by documentation to confirm that the Proponent has obtained approval from the City of Sydney Council for the temporary road closure of Merriman Street to enable mobile crane to lift and construct a platform around the HCT. Conditions attached to the terms of the temporary road closure include requirements for the Proponent to reimburse Council for the cost of any repair to any damage caused to the road or footpath as a result of the works and to pay a Public Domain Damage Deposit.

The Department notified Council and key agencies of the submission of the RtS. It was also placed on the Department's website. Four submissions were subsequently received from Council, EPA, SafeWork NSW and TfNSW and are summarised in **Table 1** above.

As detailed in **Table 1**, a number of concerns were raised by the EPA in relation to the various environmental management plans required to be prepared for the proposed demolition works. The Proponent has subsequently submitted amended environmental

5.2 Environmental Management

The proposed change in the demolition methodology has required detailed consideration of potential environmental impacts and subsequent changes to the project specific environmental management plans, including those relating to noise and vibration, waste, air quality, asbestos and traffic management.

As detailed in **Section 4.0** of this report, the Department and the Proponent have consulted closely with the EPA, SafeWork NSW, TfNSW and Council. In particular, SafeWork NSW and the EPA have made a substantial contribution to the refinement of the management plans to ensure that they meet the appropriate legislative requirements and include relevant monitoring and mitigation measures for implementation during demolition of the HCT.

As a consequence of this consultation, the EPA has advised that issues associated with the initial management plans have been satisfactorily resolved and SafeWork NSW has recommended a number of minor issues to be addressed (**Section 4.2**). Based on this consultation and the Department's consideration of the amended management plans (and noting that the existing conditions of the Project Approval require that the management plans be finalised in consultation with the EPA), the Department recommends that the amended management plans be approved and the relevant conditions of the Project Approval be amended to require the plans to be implemented for the duration of the works.

Relevant matters in relation to noise impacts and asbestos management are considered separately below.

5.3 Noise Impacts

The cumulative noise levels generated during the demolition works as a result of the change in the demolition methodology are predicted to exceed the noise management levels established for residential properties in Bettington and Merriman Streets, which are the nearest affected receivers to the site. The predicted exceedences for each stage of the demolition works as detailed in the Deconstruction Work Noise and Vibration Assessment (DWNVA) are summarised in **Table 2** below and includes predicted noise levels resulting from the use of hammers to crush concrete in the event that pulverisers cannot be used.

Table 2: Predicted Noise Levels- Residential Receivers Merriman and Bettington Streets

Demolition Stage	Cumulative Noise Level at Receiver dB(A) $L_{eq}(15mins)$	Noise Management Level Affected Level dB(A) $L_{eq}(15mins)$
Stage 1- Site Establishment	52-74	54
Stage 2- Preparation Works	62-79	54
Stage 3- Deconstruction works		
• Phase 1- top slab/deck and roof removal	62-76 (if pulverisers used to crush concrete) 67-77 (if hammers are used to crush concrete)	54
• Phase 2- demolition of remainder of slab	55-66 (if pulverisers used to crush concrete) 65-72 (if hammers are used to crush concrete)	54
• Phase 3- demolition of main slab and concrete core	62-78 (if pulverisers used to crush concrete) 70-90 (if hammers are used to crush concrete)	54
Stage 4- Removal of Core Footings	53-69	54

certification be prepared by a certified asbestos assessor and submitted to prior to the commencement of construction confirming that all asbestos has been removed from the HCT. The Department has considered the amended AMP and is satisfied that it has appropriately addressed asbestos removal, health and safety management, environmental management and implementation of a monitoring program.

Subject to compliance with the existing conditions of the Project Approval, the Department is satisfied that the demolition of the HCT can be suitably managed to minimise any potential harm to workers and neighbouring properties. Minor amendments to the conditions are recommended to address the requirement of the EPA and SafeWork NSW as detailed above and to reference the updated Asbestos Management Plan.

5.5 Traffic Issues

In its original assessment of the demolition of the HCT (MOD 4), the Department concluded that the traffic related construction impacts resulting from the proposal are likely to be minimal in terms of traffic generation. This was based on predicted average number of vehicle movements per day associated with the demolition of the HCT being estimated at eight, with a maximum of 10 movements during the peak demolition period.

The modification application proposes changes to the demolition methodology and traffic management during the demolition works. The Traffic Management Plan (TMP) prepared by Liberty Industrial and submitted with the modification application identifies that the principal traffic associated with the modification application will be limited to the following:

- trucks accessing Merriman Street during construction and alterations of the XL platform;
- trucks accessing the cutaway (cultural space) via the existing driveway off Towns Place via Hickson Road for loading out the demolition debris during the structural demolition of the tower; and
- construction workers personal vehicles during the process.

The Demolition Work Plan requires that all truck and construction traffic use the basement of the cultural space during Stage 2-4 of the demolition. It is estimated that on average, the modified proposal will result in a peak generation of approximately 10 vehicle movements per day and an average of eight vehicle movements per day and therefore, remains generally consistent with the approved traffic generation.

The modified proposal and the amended Traffic Management Plan have been reviewed by TfNSW. During the exhibition of the modification application, TfNSW raised a number of issues in relation to the Traffic Management Plan, the use of classified roads and the potential need for a Road Occupancy Licence (**Section 4.1**). The Proponent's RtS has subsequently been reviewed by TfNSW, including the amended Traffic Management Plan and TfNSW has recommended a number of conditions in respect to obtaining an Road Occupancy Licence (if required) and minor amendments to the Traffic Management Plan (**Section 4.1**).

Having regard to the comments of TfNSW and the nature of the approved project, the Department considers that the modified proposal is beneficial in terms of reducing the traffic impacts on the local road network and in particular, in relation to the reduced requirements for the closure of Merriman Street and Bettington Streets and the loss of existing on-street parking during the demolition works. Therefore, subject to the implementation of the traffic management measures contained in the TMP, including the installation of advisory road signage, the use of road traffic controllers, and the notification of residents in Merriman Street of any road closures, the Department is satisfied that the volume of construction traffic generated by the modified proposal will have minimal impact on the local traffic network and therefore, raises no objection to this aspect of the application.

timing for the Interpretation Plan to be submitted and approved by the Secretary to prior to the commencement of permanent works at ground or below ground level.

The Department has considered this element of the application and supports the Proponent's request for additional time to resolve and finalise the Interpretation Plan. However, the Department considers it to be relevant for the Interpretation Plan to be endorsed by the Secretary prior to the commencement of demolition works below the Merriman Street ground level in order to ensure that opportunities for the interpretation of the HCT are fully explored prior to its full demolition. The Department has recommended that Condition B41 be amended accordingly.

Statement of Commitments

The Proponent has submitted an amended Statement of Commitments which has been updated to reference the current amended environmental management plans. The amended Statement of Commitments also relevantly commits the Proponent to undertaking the demolition work in accordance with the amended environmental management plans.

The Department considers the amendments to the Statement of Commitments to be relevant and appropriate to reflect the changes to the demolition methodology. Accordingly, the Department has recommended that the Project Approval be amended to include the updated Statement of Commitments for the demolition of the HCT.

6. CONCLUSION

The Department has assessed the modification application in accordance with the relevant requirements of the EP&A Act. The Department's assessment concludes that the environmental impacts resulting from the proposed modification to the demolition methodology can be appropriately managed and mitigated subject to the implementation of the environmental management plans which have been refined during the assessment process in consultation with the EPA and SafeWork NSW.

Consequently, it is recommended that the Project Approval be modified subject to the conditions discussed in **Section 5.0** of this report.

7. RECOMMENDATION

It is recommended that the Director, Key Sites Assessments:

- (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.

Prepared by: Sara Roach, Contract Planner

Endorsed by

 6/5/16

Cameron Sargent
Team Leader
Key Sites Assessments

Approved by

 6/5/16.

Ben Lusher
Director
Key Sites Assessments

APPENDIX A: MODIFICATIONS TO MP10_0048 – HEADLAND PARK AND NORTHERN COVE MAIN WORKS, BARANGAROO

MP 10_0048 MOD 1

On 17 March 2011, the proponent lodged a section 75W modification (MOD 1) seeking approval to re-word conditions A3, A5, A8, B8, B17, B19 and B37 to address a number of administrative concerns raised by the proponent. This application was withdrawn on 28 February 2012.

MP 10_0048 MOD 2

On 17 April 2012, the Deputy Director-General, Development Assessment and Systems Performance approved a modification (MP10_0048 MOD 2) to amend conditions of approval and to require the proponent to prepare a plan of management for the operation of the Headland Park and the car park.

MP 10_0048 MOD 3

On 9 May 2013, the Executive Director, Development Assessment Systems and Approvals approved a modification (MP10_0048 MOD 3) to the Headland Park main works project to allow the following:

- insertion of sandstone steps providing water access adjacent to Moores Wharf;
- relocation of sewerage pumping station SPS0014 and inclusion of the fit-out of this item as an amenities block;
- construction of a third pedestrian bridge between Merriman Street and the Headland Park;
- minor changes to the cultural space and car park; and
- minor changes to the landscaping across the site.

MP 10_0048 MOD 4

On 30 July 2015 the Minister for Planning approved a section 75W modification application (MP 10_0048 MOD 4) for the demolition and removal of the Harbour Control Tower, construction of an interpretation structure on the site of the Harbour Control Tower and replacement of existing floors slab, decommissioning services and associated works.

MP 10_0048 MOD 5

On 16 July 2015, the Director, Industry Key Sites and Social Projects approved a modification (MP 10_0048 MOD 5) for alterations to the Headland Park and Northern Cove including:

- introduction of a new bushwalk plaza at the southern lift entrance to the future cultural space;
- changes to the approved paving materials for the foreshore promenade, bushwalk track and main southern entrance;
- adjustment to the position of the central access between the Headland Park and Merriman Street; and
- minor increase to the level of the upper section of the park.

MP 10_0048 MOD 6

On the 24 February 2015, the Barangaroo Development Authority submitted a section 75W modification (MOD 6) seeking approval to amend the location of two sandstone pillars at the entrance to the Headland Park from Merriman Street. This application is currently with the proponent for further consultation with the City of Sydney.

MP10_0048 MOD 7

On 27 November 2015, the Director, Key Sites Assessments approved a Section 75W modification application (MP 10_0048 MOD 7) to modify Condition B41 of the Project Approval to allow the Interpretation Plan to be submitted to the Secretary for approval prior to the commencement of the demolition works.

APPENDIX B: S75W MODIFICATION APPLICATION (MP10_0048 MOD 8)

Provided on project file (16/03856-1):

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7528

APPENDIX C: PUBLIC AUTHORITY SUBMISSIONS- EXHIBITION OF MODIFICATION APPLICATION

Provided on project file (16/03856-1) and on the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7528

APPENDIX D: PROPONENT'S RESPONSE TO SUBMISSIONS

Provided on project file (16/03856-1) and on the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7528

APPENDIX E: PUBLIC AUTHORITY SUBMISSIONS- NOTIFICATION OF RESPONSE TO SUBMISSIONS

Provided on project file (16/03856-1) and on the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7528

APPENDIX F: AMENDED (FINAL) ENVIRONMENTAL MANAGEMENT PLANS AND AMENDED STATEMENT OF COMMITMENTS

Provided on project file (16/03856-1) and on the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7528

APPENDIX G: FINAL SUBMISSIONS- EPA

Provided on project file (16/03856-1).