

# ETHOS URBAN

## Response to Submissions Report for SSD 9452

1 William Street, Sydney  
The Australian Museum, Alterations and Additions

Submitted to Department of Planning &  
Environment on behalf of The Australian Museum

18 January 2019 | 218139



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## Executive Summary

The Environmental Impact Statement (EIS) in support of SSDA 9452 was publicly exhibited for a period of 28 days between 25 October and 21 November 2018, in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Twenty submissions were received in response to the public exhibition of the EIS, including submissions made by government agencies and authorities and the general public, as follows:

- Government authorities and agencies – 9.
- Members of the public – 11.

The Department has also prepared a letter setting out additional information to be submitted prior to the final assessment of the application.

Key issues raised within the agency and public submissions include:

- Built form and Design Excellence;
- Heritage;
- Circulation and queuing;
- Relocation of Pacific Collections; and
- Section 7.11 development contributions.

In responding to the range of matters raised in the submissions, The Australian Museum proposes to amend the proposed scope of works. The refined proposal also captures changes made by the project team post-exhibition to enhance the design and function of the Museum. Revised Architectural Plans, prepared in collaboration by Cox Architecture and Neeson Murcutt Architects, are included at **Appendix B** and the key design amendments include:

- Deletion of the proposed extension to Crystal Hall and increasing the width of the main entrance to accommodate entry and exit movements;
- Retention of the existing William Street entry stair and public domain (including removal of the previously proposed Biodiversity Garden);
- Raising of the Museum Heart floor and relocating the escalators to provide a more consistent heart size throughout the Museum and reduce the opening to the escalator void;
- Relocating the internal stair to the north-west to sit behind the glazed link;
- Providing a more generously sized members lounge and education space; and
- Relocating amenities and cloakroom to the Lower Ground Level.

The overall nature of the changes proposed will result in a development that does not substantially differ from the original application that was publicly exhibited. The proposed changes largely reduce the environmental impacts of the development and will deliver an improved design outcome for this important cultural facility.

## 1.0 Introduction

Ethos Urban has prepared this Response to Submissions Report on behalf of The Australian Museum (the Museum) following correspondence from the Department of Planning and Environment, dated 21 November 2018, and the associated submissions received during the exhibition period of State Significant Development Application 9452 (SSDA 9452). The application seeks consent for alterations and additions to the Australian Museum located at 1 William Street, Sydney.

The Environmental Impact Statement (EIS) in support of SSDA 9452 was publicly exhibited for a period of 28 days between 25 October and 21 November 2018, in accordance with the requirements of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Twenty submissions were received in response to the public exhibition of the EIS, including submissions made by government agencies, authorities and the general public. The breakdown of submissions received is as follows:

- Government agencies and authorities – 9.
- Members of the public – 11.

The Department has also prepared a letter setting out additional information to be submitted prior to the final assessment of the application.

The Australian Museum and its specialist consultant team have considered all issues raised in the submissions made, pursuant to the requirements of the EP&A Act.

This report sets out the responses to the issues raised in accordance with Clause 85A of the *Environmental Planning and Assessment Regulation 2000* (EPA Regulation) and details the final project design and mitigation measures for which approval is now sought. The final project design includes amendments made by the Museum pursuant to Clause 55 of the EPA Regulation, including changes to address matters raised in the submissions.

This report provides a response to all issues raised by the various government agencies and the general public. Whilst the submissions received from agencies have been addressed individually, the submissions made by the public have been addressed on an issue by issue basis. This approach has been adopted to reflect that many of the submissions raised similar issues and concerns.

The key issues raised in submissions (government authorities and members of the public) can be broadly grouped into the following categories:

- Built form and Design Excellence;
- Heritage;
- Circulation and queuing;
- Relocation of Pacific Collections; and
- Section 7.11 development contributions.

This report responds to each of the above issues and outlines the proposed amendments to the exhibited EIS. Where individual issues are not discussed in this report, a response can be found in the table at **Appendix A**.

### 1.1 Amendments to the Proposed Development

To reflect the design changes that have been made to the proposed development following public exhibition of the application, and to address issues raised in submissions, a range of updated plans and documents have been prepared.

Revised Architectural Plans have been prepared in collaboration by Cox Architecture and Neeson Murcutt Architects and are included at **Appendix B**.

The following consultants' reports and supporting information have also been updated where necessary, and further information has been provided to supplement the material originally submitted in support of the EIS:

- Design Statement and Report prepared by Cox Architecture and Neeson Murcutt Architects (**Appendix C**);
- Revised Heritage Impact Statement prepared by Orwell and Peter Phillips (**Appendix D**);
- Aboriginal Archaeological Impacts Advice prepared by Coast History and Heritage (**Appendix E**);
- Queue and Circulation Options Package prepared by Art of Fact (**Appendix F**);
- Revised Quantity Surveyors Report prepared by the Altus Group (**Appendix G**); and
- Revised Landscape Plans prepared by Sue Barnsley Design (**Appendix H**).

The revised supporting documentation enables the Department to undertake an informed assessment of the amended proposal. The findings of the revised supporting consultant documentation are summarised at **Section 4.0** of this report. A final schedule of the mitigation measures proposed to mitigate the impacts associated with the proposed works is provided at **Section 5.0**.

This report should be read in conjunction with the original EIS prepared by Ethos Urban, dated 4 October 2018.

## 2.0 Key Issues and Proponent's Response

This section of the report provides a detailed response to the following key issues raised by the Department, government agencies and authorities and the general public during the public exhibition of the SSDA:

- Built form and Design Excellence;
- Heritage;
- Circulation and queuing;
- Relocation of Pacific Collections; and
- Section 7.11 development contributions.

A response to each of the individual issues raised by the Department and submitters is provided at **Appendix A**.

### Government Agencies and Authorities

Nine (9) submissions were received from government agencies and authorities in response to the exhibition of the EIS. Specifically, responses were received from:

- Fire and Rescue NSW;
- Office of Heritage and Environment – Heritage Division (OEH Heritage Division);
- Office of Heritage and Environment – Communities and Greater Sydney Division (OEH Communities);
- Roads and Maritime Services (RMS);
- Transport for NSW;
- Sydney Water;
- City of Sydney Council (Council);
- Environmental Protection Authority (EPA); and
- NSW Government Architect's Office (Government Architect).

A number of these submissions comprised the agency or authority confirming they had no comment on the application or providing guidance on recommended conditions. This includes submissions from Fire and Rescue NSW, RMS and Sydney Water.

The remaining government authorities to make a submission raised a variety of issues and sought clarification on a number of matters as detailed in this section and/or at **Appendix A**. The Department also provided a letter summarising the key matters to be addressed and additional information to be provided. A response to the Department's correspondence is also provided at **Appendix A**.

### Members of the Public

A total of 11 public submissions were received, of which 8 objected to the proposal, 2 provided comments and 1 offered support. These submissions raised a variety of issues including the relocation of the Pacific Collection, as well as consultation, heritage, the suitability of the venue for the *Tutankhamun* exhibition and Government funding.

The Museum has responded to the public submissions that were addressed directly to the Australian Museum and an overview of the responses to the issues raised by all public submissions is provided at **Appendix A**.



## 2.1 Built Form and Design Excellence

### 2.1.1 Issue

The GANSW raised concerns regarding the proposed works and their relationship with the Australian Museum Masterplan. Specifically, it was recommended that alterations to the existing Museum fabric be carefully considered to improve the current facility for the long-term and avoid works that are likely to require further alterations and/or demolition to make way for a holistic and coordinated Masterplan vision.

In addition, the GANSW recommended further information be provided in relation to the detailed design of the interior works (including details such as interior elevations, ceiling plans and visualisations) and suggested further design review of the proposal be undertaken through the SDRP pilot program during the design development and construction process. It was also advised that the original architects of Crystal Hall be involved in the ongoing design and construction documentation.

### 2.1.2 Proponent's Response

Since public exhibition of the SSDA, Cox Architecture and Neeson Murcutt Architects have worked in collaboration to review the design of the proposal and the feedback received. As a result of this review and the submissions received during the exhibition period, the Museum proposes to amend the proposed scope of works. Many of these changes stem from a desire to reduce redundancies by aligning the proposed works more closely with the long term vision for the Museum.

One of the major changes to the amended design is the deletion of the previously proposed extension to the Crystal Hall. Upon further review of the scheme and in light of the submissions received, the Crystal Hall extension was deemed unnecessary in the context of the anticipated long term vision for access to the Museum and a desire to retain sightlines to the heritage significant façade. As outlined at **Section 2.3** below, access and queuing for the Museum can be accommodated within the existing Crystal Hall and ramp, and within the new Museum Heart.

Other key design changes which achieve the objective of reducing redundancy in the future include:

- The proposed raising of the Museum Heart floor to match the level of the Vernon Wing, which will provide equitable access to the Museum in the short term and will match the anticipated future level of the Museum Heart to accommodate its potential extension to the east. This will establish a more legible connection between the exhibition spaces.
- The relocation of the escalators will eliminate the need for their replacement in the future as their revised location reflects the future arrival sequence and potential for an extended Great Hall.
- The deletion of the proposed Biodiversity Garden and reorientated William Street stair will reduce future redundant work as the long term vision currently anticipates a future entry off William Street and larger scale changes to the curtilage and public domain.
- The relocation of the new amenities to the Lower Ground Level also anticipates the future long term entry at this level.

Additional details surrounding the internal design changes, including materials and finishes and perspectives, are provided as part of the updated design package at **Appendix B** and a response to each of the individual issues raised by the submissions is provided at **Appendix A**. Given that the project is in the pre-approval stage, it has not yet progressed to the detailed design of interior works and as such some of the other detailed information requested around lighting, services integration and materials cannot be provided at this time. Notwithstanding, and as suggested by the GANSW, the Museum is willing to take part in the SDRP pilot program and would welcome the continued involvement of the SDRP throughout the design development and construction process.

Furthermore, the Museum is committed to Neeson Murcutt having an ongoing role in the design development and construction documentation process as requested by GANSW. Having worked extensively with the Museum, Neeson Murcutt bring an embedded knowledge of the project, a long-established rapport with the client, and positive and effective working relationships with all subconsultants. Accordingly, it is in the Museum's interests for Neeson Murcutt to continue working on this important project.

## 2.2 Heritage

### 2.2.1 Issue

The Department, OEH Heritage Division and GANSW have requested further consideration and details relating to the potential heritage impacts of the proposal, including; the detailed design of internal elements, the Crystal Hall extension, demolition of part of the sandstone façade and the reorientation of the William Street stair.

OEH also requested that an Aboriginal Cultural Heritage Assessment Report (ACHAR) be undertaken and submitted.

### 2.2.2 Proponent's Response

#### Detailed design of internal elements

As noted above, the project has not yet progressed to detailed design, however the Museum is committed to protecting the heritage significant fabric of the building wherever possible, and the project architects are working in collaboration with Orwell and Peter Phillips to achieve this. Preliminary comments on the detailed design of each identified component of the building are provided at **Appendix A** and the Museum would be willing to accept a condition of consent requiring the ongoing involvement of the GANSW in the detailed design of these aspects of the development. An updated Heritage Impact Statement has also been prepared in reference to the amended scheme (refer to **Appendix D**).

#### Crystal Hall extension

In light of the feedback provided by OEH and GANSW, the need for the extended Crystal Hall has been reconsidered and the Museum has decided to remove this component from the application. This will retain sightlines to the existing heritage façade and avoid clutter when viewed cumulatively with the existing hall and access ramp off College Street.

#### Demolition of sandstone façade

An enlarged opening to the northern façade of the Parkes Farmer wing (three structural bays wide) in combination with the relocated fire stair is necessary to improve circulation and consolidate the public entry and exit to the Museum. Without this expanded entry, the ability for the Museum to efficiently move people in and out of the Museum Heart and Touring Exhibition space would be severely hindered. Although the extent of the opening is proposed to be increased, the impacted area is behind the existing Crystal Hall and not readily visible from the public domain.

The project heritage consultant, Orwell and Peter Phillips, has reviewed the revised scheme and has prepared an updated Heritage Impact Statement (**Appendix D**) to include an assessment of this component of the proposal (and the amended scheme as a whole). The revised report rates the proposed new opening as having a 'moderate negative' heritage impact and, in order to mitigate this, recommends careful detailing of the new opening, especially at the western end, and conservation of the remaining stonework, including repointing failed joints. The report also recommends salvaging the stone facings where possible, however notes that previous attempts had not been successful.

On balance, the enlarged opening is considered acceptable as it will provide necessary access and circulation to the Museum and will allow for the protection of significant heritage fabric elsewhere, including through the deletion of the Crystal Hall extension which will preserve views to more of the building's northern façade. Glazing to the eastern and western façades of the link bridge encourage views to the Parkes Farmer heritage façade from the link. Additionally, the opening and its junction to the link will be detailed to allow nibs of sandstone to be expressed upon entry.

#### Reorientation of William Street stair

In response to feedback provided by OEH and the GANSW, the proposed reorientation of the William Street stair has been removed as part of the amended scheme. This will reduce redundant work (as it aligns with the anticipated future Lower Ground Level entry) and protect this heritage significant feature. As a result, the Crystal Hall undercroft largely remains in its current arrangement with minor works to improve access and assembly for groups.

## ACHAR

Coast History and Heritage has reviewed the amended proposal against the requirements for the preparation of an ACHAR, specifically whether the revised scope of works would result in any 'ground disturbance'. A copy of this advice is included at **Appendix E**.

Whilst the original proposal included aspects which may have resulted in ground disturbance, including the realignment of the William Street stair and the proposed Crystal Hall extension, the current revised proposal only includes minor excavation for the base of the new elevator shaft and the two new escalators. These works are both located entirely within the Still Addition building footprint.

Based on the research undertaken by Coast History and Heritage, including a site inspection and search of historical records, it is clear that the subject area has previously been significantly impacted, including from the construction of the original Still Addition which involved excavating basement levels into the sandstone bedrock below. The additional proposed impacts from the proposal will merely extend that excavation further into existing bedrock and has no potential to impact any Aboriginal archaeological remains. As such, Coast History and Heritage conclude that the amended proposal does not include works that would constitute 'ground disturbance' and that an ACHAR is therefore not required.

## 2.3 Circulation and Queuing

### 2.3.1 Issue

GANSW raised concerns that the proposed works may create conflicts in circulation between different queuing areas, amenities and exhibition areas, and may not provide sufficient area for queuing to match future visitor numbers. Detailed exhibition and circulation diagrams were requested.

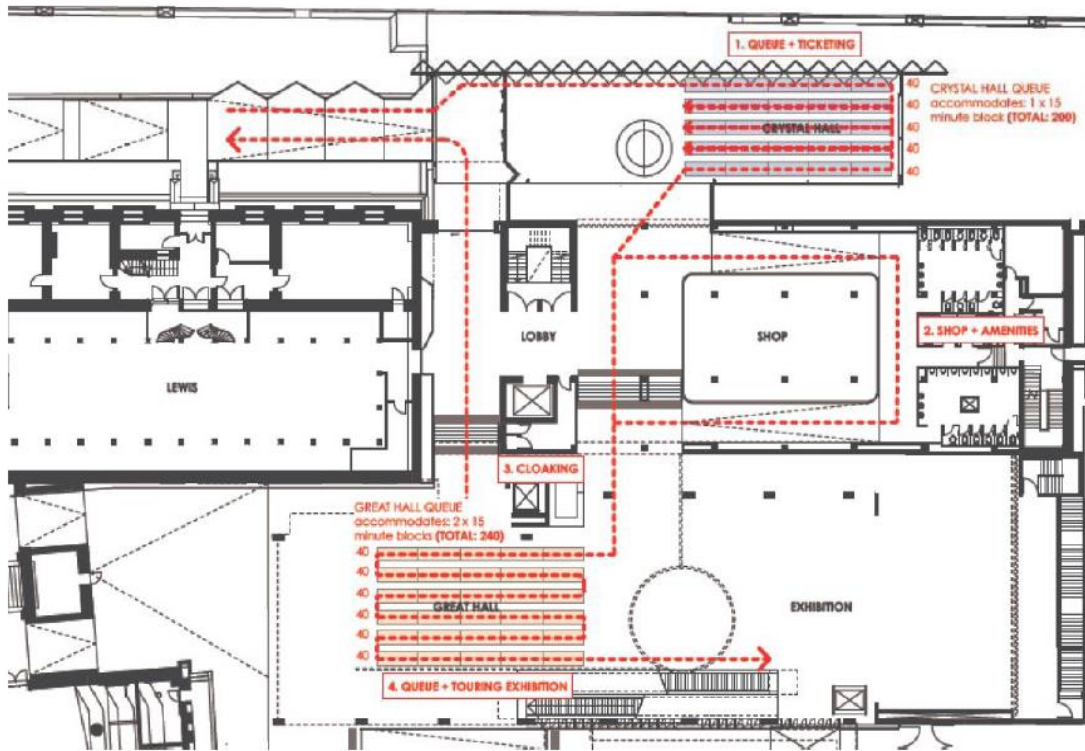
### 2.3.2 Proponent's Response

The circulation and queuing arrangements for the Museum have been reviewed as part of the amended design and detailed exhibition and circulation diagrams have been prepared by Art of Fact (**Appendix F**). The amended scheme makes better use of the existing space to accommodate the projected visitor numbers whilst removing the need to extend Crystal Hall.

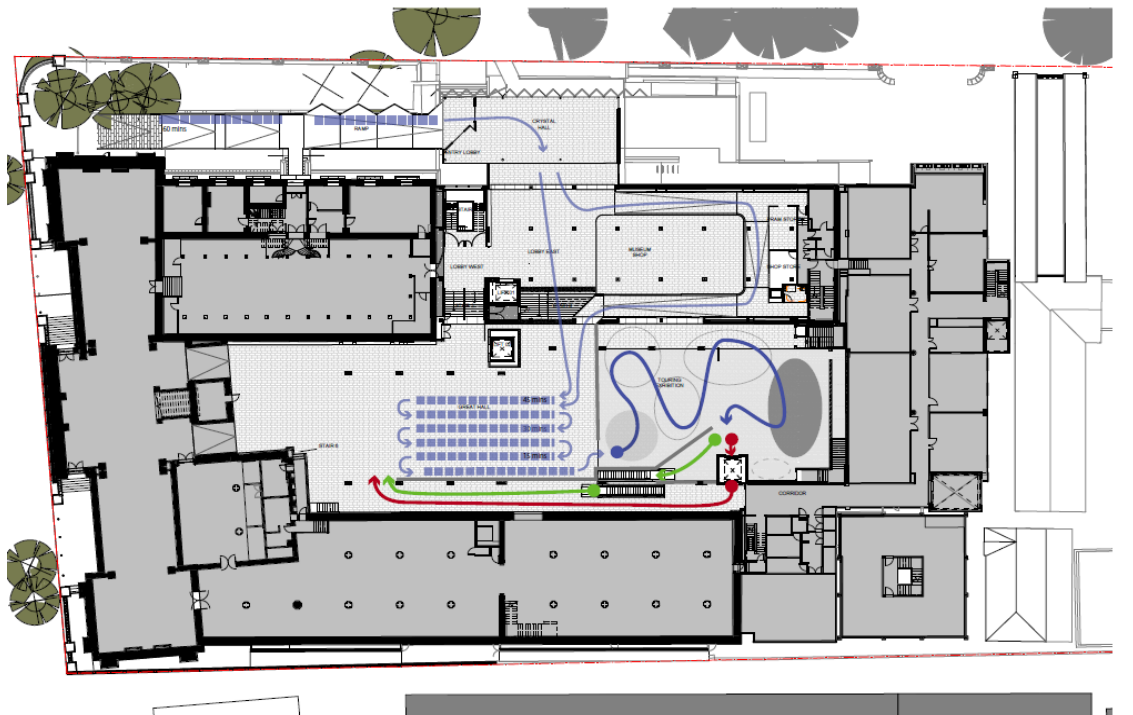
The key moves which seek to reduce redundancy in the design, such as relocating the escalators and the widening of the Parkes Farmer Wing opening, enhances circulation and opens up the Museum Heart to provide more space for internal queuing. As shown at **Figure 1**, the Museum Heart can now accommodate over 390 visitors rather than the 240 visitors accommodated by the previous design. By using the existing ramp extending from College Street to Crystal Hall for an additional 130 queueing spaces at peak times, the Museum can accommodate over 520 queueing visitors at any one time. This represents just one of the available queuing options created by the amended design, with other options including additional queuing within the Parkes Farmer Wing noted above already. It is noted that temporary weather protection would be provided for the access ramp on an as-needs-basis during peak times (e.g. for the duration of blockbuster exhibitions). This would form part of a separate temporary works application as required.

**Figure 2** demonstrates the proposed groups access arrangements for the amended design. The amended scheme retains the William Street stair for the secondary groups entry in its existing configuration. This existing location works to achieve better visibility to the basement door which provides an accessible entry to the Basement Level from the William Street bus drop off through a new path which connects from the footpath to the accessible groups entry. Two enlarged education rooms are provided at Lower Ground Level which can act as waiting areas to facilitate the steady flow of groups through the Museum.

Queuing for groups can also occur in the Crystal Hall undercroft which remains in its current configuration and groups will be welcomed and managed by Museum staff. Through user group consultation, anticipated visitor numbers are accommodated in this space and will be limited to groups. It is noted that groups visiting the Museum require a booking and therefore numbers can be moderated.



Previous Proposal



Queue and circulation study 4.  
60 minute wait time.  
15 mins external ramp. No lobby wait or  
internal ramp queue.  
45 mins in Great Hall.

All visitors together  
Escalators users  
Lift users

First experience  
Last experience

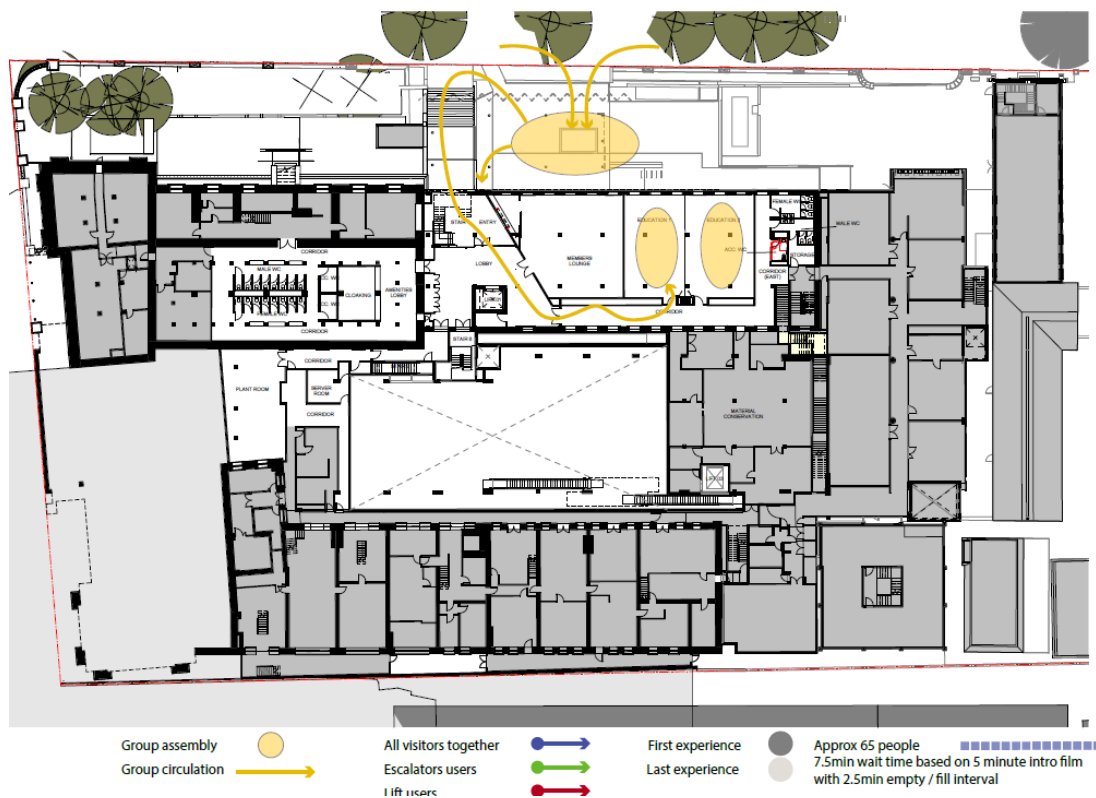
Approx 65 people  
7.5min wait time based on 5 minute intro film  
with 2.5min empty / fill interval

SK 2019 01 16 AoF 4 Ground Floor

Current Proposal

Figure 1 Comparison of Queuing Arrangements

Source: Art of Fact



**Figure 2 Group Entry Arrangements**

Source: Art of Fact



## 2.4 Relocation of Pacific Collection

### 2.4.1 Issue

The majority of public submissions raised concerns regarding the relocation of the Museum's Pacific Collection away from the 1 William Street site.

### 2.4.2 Proponent's Response

In June 2018, the NSW Government committed \$50.5m to deliver the first phase of 'Project Discover' which seeks to upgrade the Australian Museum and includes repurposing existing storage space to significantly expand the touring exhibition halls. The Australian Museum has the smallest public floor space of any major museum in the nation and part of the vision of Project Discover is to showcase more of the 21.9 million objects in its world class collection, including those objects which are part of the Pacific Collection. As part of the initial works, collections storage is being re-purposed for much needed public gallery space that will be used to showcase both permanent and temporary exhibitions well into the future.

Given the significant heritage limitations of the Australian Museum site at 1 William Street, the current storage facilities do not provide the optimum environment for the Pacific Collection and the following challenges have become apparent:

- Inaccessibility for visitors to the collection;
- Lack of area for welcoming of visitors, examination of the collection and for privacy;
- Low ceiling heights and very narrow aisles which do not allow objects to be given proper space to rest, or for easy viewing/retrieval;
- Many larger objects from the Pacific Collection already have to be housed offsite at Castle Hill due to space constraints, meaning the collection is currently separated; and
- Community access is severely limited in terms of capacity, allowing very few people to visit the collection at any one time.

By contrast, the new facility chosen to house the Pacific Collection is far superior as:

- It incorporates purpose-built storage racking and individual stillages so that access and conservation of objects is optimised;
- The entire collection can be easily housed in one place, as the new space is almost double the size of the current storage area;
- It includes new climatic and humidity-controlled services which are far superior than the existing facility due to the Australian Museum building's heritage constraints;
- It incorporates a large, secure space within the storage area for objects requiring special care or segregation, as identified as a requirement by the Museum's expert Pacific Collections Manager;
- It has larger spaces for community groups to access collections and interact with objects, including purpose-built rooms, easier access for research, cultural workshops and VIP visits; and
- It is located geographically in the centre of Sydney, closer to the Pacific diaspora.

In addition, it is noted that the Museum's commitment to the Pacific Collection and the Australian Pacific community has become a prime focus of the Museum in recent years. In particular:

- The Australian Museum's first Pacific Spirit gallery was opened in 2016 (before that time there was no permanent exhibition of this world class collection);
- A significantly expanded connection with Pacific diaspora communities has taken place in recent years, including an at-risk youth reconnection project, '*Oceania Rising*', involving a year-long program about the cultural effects of climate change on Pacific peoples and a quadrupling of the number of community visits to the collection;

- The management of the Pacific Collection's relocation has included strict cultural protocols for staff and contractors around the movement of objects before, during and after their relocation; and
- Scientific research has also taken on a much stronger aspect of involving and being led by community interests and concerns.

## 2.5 Section 7.11 Contributions

### 2.5.1 Issue

Council has requested a Quantity Surveyors Report with costs attributable to each component of the development and additional justification for an exemption to the Central Sydney Contributions Plan.

### 2.5.2 Response

Altus Group has prepared a Project Quantity Surveyors Report (**Appendix G**) which includes the schedule of costs as requested by the City of Sydney Council.

Section 2.2(c) of the *Central Sydney Development Contributions Plan 2013* identifies a range of circumstances in which exemptions from a levy under section 7.11 (formerly Section 94A) of the EP&A Act may be considered by the consent authority. This includes the following:

- Not-for-profit development – development undertaken on a cooperative or not-for-profit basis that provides a distinct community benefit, including but not limited to childcare services and emergency services such as fire stations, police stations and ambulance stations; and
- Heritage – development for the sole purpose of the adaptive reuse of an item of environmental heritage. The terms 'item' and 'environmental heritage' have the same meaning as in the *Heritage Act 1977*.

As established within the submitted EIS, The Australian Museum is a not-for-profit public institution which relies on government grants, donations, and community funding to provide new facilities and exhibitions for the public at large. The current use of the site and the proposed improvements are of an inherently public nature, providing important educational, cultural and economic benefits to the State.

In addition, the entirety of the Schedule of Costs (refer to **Appendix G**) can be attributed to works relating to an item of State heritage and therefore an exemption should be granted on this basis alone.

Accordingly, an exemption from the payment of a section 7.11 should be granted for the proposal.

### 3.0 Proposed Amended Development

Since public exhibition of the proposal, amendments have been made to the proposed development. The changes include those made in response to some of the issues and comments raised by the Department, Council and the general public, along with other amendments made to strengthen and enhance the design of the proposal.

The following section presents a brief updated description (where relevant) of the modified development for which approval is sought. As illustrated by the description of refinements at **Section 3.1** and the revised environmental assessment provided at **Section 4.0**, the proposed changes largely reduce the environmental impacts of the development and will deliver an improved design outcome.

#### 3.1 Overview of Changes

**Table 1** provided a description of the key amendments sought to the proposal as exhibited.

**Table 1 Summary of key design changes**

Location	Summary of key changes
Loading Dock	<ul style="list-style-type: none"> <li>No new changes.</li> </ul>
Basement (William Street)	<ul style="list-style-type: none"> <li>Retain exiting William Street stairs rather than reorientating them to the east.</li> <li>Provide a new access path from the footpath to the group entry.</li> <li>Relocate existing temporary coffee cart to the east.</li> <li>Retain existing sheltered garden and delete Biodiversity Garden.</li> <li>Reconfigure the fire room and back of house to improve loading access.</li> <li>Relocate escalators and reduce the height of the void to increase the size of the Museum Heart.</li> </ul>
Lower Ground	<ul style="list-style-type: none"> <li>Provide new dedicated group amenities.</li> <li>Relocate the internal stair to the glazed link to improve circulation and provide views north to the city and St Mary's Cathedral.</li> <li>Provide a more generously sized members lounge and education space.</li> <li>Relocate amenities and cloakroom to the Lower Ground Level.</li> <li>Undertake additional demolition to materials conservation to facilitate relocated escalator.</li> </ul>
Lower Ground Mezzanine	<ul style="list-style-type: none"> <li>No new changes.</li> </ul>
Ground Floor	<ul style="list-style-type: none"> <li>Retain existing Crystal Hall at its current length (delete previously proposed extension).</li> <li>Increase the size of the opening to the Parks Farmer Wing façade to accommodate a larger entry/exit.</li> <li>Increase the size of the proposed Museum shop.</li> <li>Relocate amenities and cloakroom to Lower Ground Level.</li> <li>Alteration to lift to stop at Ground Floor.</li> <li>Raise the floor of the Museum Heart to match the level of the Vernon Wing to remove the need for redundant ramps and create a more legible connection between the exhibition spaces.</li> <li>Relocate escalators and reduce the void height to increase the size of the Museum Heart.</li> <li>Provide new access to existing amenities and storage.</li> </ul>
Level 1	<ul style="list-style-type: none"> <li>Relocate stair to the glazed link to improve circulation and provide views north to the city and St Mary's Cathedral.</li> <li>Demolish Level 1 slab and construct a new ramp adjacent to Lift 1 to improve head height to the Ground Level below.</li> <li>Construct new lift landing and balustrade for Lift 2 to allow it to stop at Level 1.</li> </ul>
Level 2	<ul style="list-style-type: none"> <li>Relocate stair to the glazed link to improve circulation and provide views north to the city and St Mary's Cathedral.</li> </ul>



Location	Summary of key changes
	<ul style="list-style-type: none"> <li>Provide a new ramp from the servery up to the Lewis Wing.</li> </ul>
Level 3	<ul style="list-style-type: none"> <li>Relocate stair to the glazed link to improve circulation and provide views north to the city and St Mary's Cathedral.</li> </ul>
Level 4	<ul style="list-style-type: none"> <li>Provide new access to the Level 4 café from the relocated stair.</li> <li>Alter lift to open to the north.</li> </ul>
Roof	<ul style="list-style-type: none"> <li>Relocated stair discharge and replacement/modification of existing rooftop plant to comply with BCA requirements.</li> </ul>

Revised architectural plans detailing the above changes have been prepared in collaboration by Cox Architecture and Neeson Murcutt Architects (refer to **Appendix B**) and revised Landscape Plans have been prepared by Sue Barnsley Design (refer to **Appendix G**). The revised plans also capture a number of other insignificant design changes that have been made since public exhibition as a result of the design development process.

To accompany the revised plan set, an updated Design Statement has been prepared by Cox Architecture and Neeson Murcutt Architects which highlights and provides further explanation of the proposed key changes to the design. A copy of this Statement is included at **Appendix C**.

## 4.0 Additional Information and Environmental Assessment

The exhibited EIS addressed the potential impacts of the overall development against a range of matters relevant to the development. Except where addressed in this report, the conclusions of the original assessment remain unchanged.

It is noted that the amended scheme largely involves internal changes to the Museum and the overall scope of external alterations proposed has been reduced. Accordingly, the overall environmental impacts associated with the project will be reduced, particularly in relation to matters such as visual impacts, urban design, acoustic and construction impacts.

### 4.1 Consistency with Original SSDA Scheme

The scheme remains generally consistent with, and does not substantially differ from, the development as originally proposed and submitted. The objectives of the proposal remain consistent as the original design and the revised design generally reduces the overall scope of works and reduces redundancy in regard to fulfilling the longer term vision of improvements to the Australian Museum site.

Importantly, the proposal continues to achieve design excellence and offers significant benefits in terms of facilitating additional exhibition space, improving visitor experience and general functionality of this world-class cultural facility.

### 4.2 Built Form and Urban Design

An Updated Design Statement and Report (**Appendix C**) has been prepared by Cox Architecture and Neeson Murcutt Architects in support of the amended scheme. As outlined at **Section 2.1** above and demonstrated by the revised design report, the revised scheme enhances the built form of the Museum and results in a reduced impact when compared to the original proposal.

In light of the reduced scope of external works proposed, improvements to the function and longevity of the internal works and the Museum's commitment to ongoing consultation with the GANSW throughout the post-approval stages, the amended scheme will result in an improved built form and urban design outcome for the site.

### 4.3 Landscape Design

Revised Landscape Plans (**Appendix H**) have been prepared by Sue Barnsley Design to reflect amendments made to the landscaping and William Street public domain, and the additional tree planting requested by the City of Sydney Council. The changes reflect the decision to not proceed with the Crystal Hall extension and reorientation of the William Street stairs. As such, the Crystal Hall undercroft largely remains in its current arrangement with minor works to improve access and assembly for groups. The amended scheme reduces the extent of landscape works proposed, retains the William Street heritage stairs and moves the existing temporary coffee cart east. This reduces redundant work and aligns with the anticipated future Lower Ground Level entry for the Museum.

The revised Landscape Plans also show the retention of Tree 7 in accordance with the submission made by the City of Sydney Council.

### 4.4 Aboriginal Archaeology

As outlined at **Section 2.2.2** above, and the Coast History and Heritage advice at **Appendix E**, the revised scheme does not include any works that would result in 'ground disturbance' and therefore the request for an ACHAR is considered unnecessary in the circumstances. Coast History and Heritage has undertaken additional research since submission of the original EIS which confirms the findings of the original study that the proposal is highly unlikely to impact any Aboriginal archaeological remains.

### 4.5 Heritage

A revised Heritage Impact Statement (**Appendix D**) has been prepared by Orwell and Peter Phillips which addresses the amended proposal. Notwithstanding the proposed design changes, the Heritage Impact Statement continues to conclude that the overall impact of the proposal is 'neutral to minor positive' and suggests that careful

detailing of the new work, including the matching of original finishes where appropriate, will mitigate many of the minor negative impacts.

As noted at **Section 2.2** above, additional information has been provided at **Appendix A** to respond to concerns raised by OEH in their submission. The project has not yet progressed to detailed design, however the Museum is also committed to achieving a positive heritage and design outcome for the project and will involve the GANSW throughout the design development and construction phases to ensure that this is achieved.

#### **4.6 Transport and Parking**

The amended scheme does not include changes to the proposed transport and parking arrangements for the site. A new bus pick-up/drop-off zone is still proposed on William Street which will improve accessibility for visitor groups that arrive by bus and the amended Landscape Design continues to provide group waiting areas to reduce congestion along the William Street footpath.

Transport for NSW requested additional information to justify the adequacy of the proposed group drop off/pick up zone to accommodate the anticipated group visitor numbers. A number of other matters were also raised by Transport for NSW and a response to these is provided at **Appendix A**.

#### **4.7 Contamination**

A Contamination Study was prepared by Douglas Partners and submitted with the original EIS. The proposed amendments to the design do not alter the conclusions of this report which states that there is a low to moderate risk of localised contamination and that the site can be made suitable for the proposed development subject to standard mitigation measures. These measures have been included as part of the final mitigation measures proposed at **Section 5** below.

The EPA raised a number of additional matters in relation to contamination within their submission and a detailed response to each item is provided at **Appendix A**.

#### **4.8 Ecological Sustainable Development**

The proposed amended scheme will continue to be guided by a 5 Star Greenstar equivalent target and the Museum maintains their objective of diverting 60% of construction and demolition waste from landfill. The ongoing operation of the Museum will be guided by the Museum's Environmental Sustainability Action Plan.

Opportunities to reduce energy consumption and increase energy from non-renewable sources will be considered as part of the overall energy strategy for the redevelopment. This will include the review and implementation, where appropriate, of:

- High efficiency LED lighting which still achieves the enhanced light requirements of the Museum;
- Specification of high efficiency chillers and boiler equipment to deliver air-conditioning to the facility;
- Use of escalators with automatic controls to either slow or stop operation in periods of low use;
- New lifts will look to include efficient controls to minimise energy use when not in use; and
- Demand control ventilation for large exhibition spaces to reduce heating/cooling loads for the diverse occupancy of the space.

As such it is considered that the proposal will continue to deliver a development that is consistent with the principles of ESD.

## 5.0 Final Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 2** below. These measures replace those outlined in the original EIS.

**Table 2 Final Mitigation Measures**

Mitigation Measures
<p>Construction Impacts</p> <ul style="list-style-type: none"> <li>Implement the recommendations of the Preliminary Construction Management Plan prepared by the Australian Museum dated October 2018.</li> <li>Prepare a detailed Construction Management Plan and Construction Traffic Management Plan prior to commencement of works.</li> <li>During construction works, undertake the recommended tree protection measures included at Section 10 of the Arboricultural Impact Assessment Report dated September 2018.</li> </ul>
<p>Noise and Vibration</p> <ul style="list-style-type: none"> <li>Implement the recommendations of the Construction Noise and Vibration Strategy dated October 2018, prepared by EMM, including: <ul style="list-style-type: none"> <li>external works to be restricted to ICNG standard hours and daytime OOH only;</li> <li>loading of rubble into trucks is to occur within a dedicated area at the loading dock. Consideration of localised screening or acoustic 'tent' where practical;</li> <li>consideration of loading internal rubble into 'skips' that are loaded onto trucks in lieu of utilising a loader or excavator and dumped into trucks at loading dock. Skip bin to be located within a dedicated area with perimeter acoustic screening;</li> <li>consideration of temporary acoustic barriers (eg. Echobarrier or eq.) on scaffolding for 'Crystal Hall';</li> <li>access from 'heart' and internal works to loading dock incorporate self-closing door, air lock or acrylic curtains (min. 3mm thick) to control breakout noise;</li> <li>idle plant and equipment to be switched off when not in active use;</li> <li>minimise the number of plant items operating concurrently, particularly when in close proximity to surrounding receivers;</li> <li>minimise the need for vehicle reversing by arranging for one-way site traffic routes. If this is unachievable, install reversing "quackers" rather than "beepers"; and</li> <li>noise and vibration monitoring will be adopted as a management strategy if complaints are received during the construction period.</li> </ul> </li> <li>Adoption of general noise and vibration management practices (AS 2436-2010).</li> <li>Preparation of a Construction Noise and Vibration Management Plan prior to works commencing.</li> </ul>
<p>Heritage/Archaeology</p> <ul style="list-style-type: none"> <li>Implement the recommendations of the Heritage Impact Statement prepared by Orwell and Peter Phillips, dated January 2019, including: <ul style="list-style-type: none"> <li>Appointing a suitably qualified and experienced heritage consultant throughout the documentation and construction period, with authority to review and advise on documents and work in progress.</li> <li>Secure suitable sources of replacement stone for the development as soon as possible.</li> <li>Ensure the use of skilled and experienced heritage tradespeople for work on or in the vicinity of elements of exceptional, high or medium heritage significance.</li> <li>Require the completed project to be signed off by the appointed heritage consultant as having been completed in accordance with good conservation practice.</li> </ul> </li> </ul>
<p>Sustainability</p> <ul style="list-style-type: none"> <li>Ensure the works comply with Section J1 and J2 of the BCA 2016.</li> <li>Where practical, ensure the development meets the targets of the Ecologically Sustainable Development Statement prepared for the project, dated August 2018.</li> <li>Prepare a detailed Waste Management Plan prior to the commencement of works.</li> </ul>
<p>Design Excellence</p> <ul style="list-style-type: none"> <li>Continue to consult with Neeson Murcutt Architect in the preparation of design and construction documentation for works relating to the Crystal Hall</li> <li>Involve the SDRP in the design process of future components of the Masterplan if these stages proceed.</li> </ul>

## Mitigation Measures

### Parking and Access

- Apply to the City of Sydney Traffic Committee for changes to parking restrictions along the William Street frontage to accommodate the proposed bus bay.
- Prepare an Access Management Strategy to ensure the safe and efficient movement of groups between the bus bay and the Museum

### Contamination

- Undertake the applicable works recommended at Section 7 of the Douglas Partners Preliminary Site Investigation, dated October 2018, including:
- Completion of a hazardous material survey and removal of materials where required
- Limited and targeted soil sampling in areas of the proposed works (may need to occur post-demolition).
- Remediation of soils and preparation of validation report if required.

## 6.0 Conclusion

The Australian Museum and its specialist consultant team have considered all submissions made in relation to the public exhibition of SSD 9425. A considered response to all submissions has been provided within this Response to Submissions Report and the accompanying documentation.

In responding and addressing the range of matters raised by the Government agencies and authorities, the proposed works have been refined. The changes proposed to the works largely address concerns raised within the submissions or result from opportunities to improve the scheme. The amendments do not result in any new environmental impacts relative to surrounding sites or the wider community. Accordingly, renotification of the revised SSDA is considered unnecessary.

The refined proposal has significant planning merits as it will:

- Reduce redundancy in the design and improve the function and longevity of the internal works;
- Improve the heritage outcome of the development;
- Enhance visitor experience and offer an expanded range of facilities and attractions;
- Improve equitable access to the Museum and circulation between exhibits; and
- Increase the ability of the Museum to attract and host blockbuster exhibitions.

We trust that the information provided satisfies the requirements of the additional information request. We look forward to the Department progressing the assessment of the application and to receiving a set of draft conditions for consideration in due course.