



DESIGN 5

A R C H I T E C T S

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SYDNEY OPERA HOUSE

BUILDING RENEWAL UNDER THE STEPS, CREATIVE LEARNING CENTRE, & SOUTHERN FOYERS

Heritage Impact Statement Final Report 11/11/2016

1.0 BACKGROUND & PURPOSE OF REPORT

Design 5 - Architects has been engaged by the Sydney Opera House Trust (SOHT) to prepare an assessment of the Heritage Impact of the proposed Building Renewal projects – Under the Steps, Creative Learning Centre, and Southern Foyers.

Refer to Section 3.2 of this report for an explanation of the naming of some of the projects and affected spaces in this application, as some differ from presently accepted names, or those used in other documents.

A more detailed description of each project is given below in Section 4 of this report.

The report has been prepared by Alan Croker (director) of Design 5.

2.0 SEARS REQUIREMENT

The requirements for this Heritage Impact Statement (HIS) are stated in Schedule 2 of the Secretary's Environmental Assessment Requirements (SEARS) for Application No. SSD 7945, as issued 30 September 2016. They are as follows:

- *The application must include a Heritage Impact Statement (HIS) prepared by a qualified Heritage Consultant. The HIS must address any impact to the heritage significance of the Sydney Opera House and its setting, including impacts to the world heritage buffer zone and/or Aboriginal, historic or archaeological significance.*
- *The HIS must provide a detailed assessment of each of the key proposed elements, and implications of National Construction Code (NCC) compliance and construction issues.*
- *The HIS must provide an assessment of the impacts, of the proposed works, to the configuration, spaces, structures, fabric of the House and the overall heritage significance of the Sydney Opera House.*

- *An assessment of building components and spaces proposed to be altered or removed where the significance of these individual components and spaces is not described in the 3rd edition Conservation Management Plan for the Sydney Opera House.*
- *Discussion of all options that have been considered, including NCC and construction issues, demonstrating that the proposal presents the best option with the least heritage impacts.*
- *A colour and finishes schedule, and a lighting plan.*
- *The HIS must consider current and known future access requirements under the NCC and the Disability Discrimination Act 1992 and assess the heritage impact of these requirements.*
- *The HIS must assess the proposal against the requirements of the following documents:*
 - *NSW Heritage Manual;*
 - *Matters of National Environmental Significance Significant Impact Guidelines 1.1;*
 - *Management Plan for the Sydney Opera House;*
 - *Conservation Management Plan Sydney Opera House: A Revised Plan for the Conservation of the Sydney Opera House and its Site (3rd Edition); and Draft Conservation Management Plan (4th Edition);*
 - *Utzon Design Principles;*
 - *Statement of National Heritage Values of the Sydney Opera House; and*
 - *Sydney Opera House Accessibility Masterplan 2015.*

The requirement to assess the proposal against the Draft Conservation Management Plan (4th Edition) was discussed at a meeting with the Heritage Division on 16 September 2016, and it was agreed that this would not be required. Refer also to Section 6.3 of this report.

3.0 BASIS OF ASSESSMENT

This Heritage Impact Statement (HIS) assesses the proposal against the following documents:

- *Matters of National Environmental Significance – Significant Impact Guidelines 1.1*, EPBC Act 1999, Department of the Environment 2013
- *Sydney Opera House, A Revised Plan for the Conservation of the Sydney Opera House and its Site*, by James Semple Kerr. Third Edition, SOHT, 2003 (referred to below as the CMP 3rd edition)
- *Sydney Opera House, Utzon Design Principles*, SOHT May 2002 (referred to below as the UDP 2002)

The *Management Plan for the Sydney Opera House* (prepared in 2005 as part of the bilateral agreement negotiations) references the CMP and the Utzon Design Principles and provides a framework for protection of the World and National Heritage values of the Sydney Opera House site. It has been endorsed by the Heritage Division, Department of Planning (formerly the NSW Heritage Office). The Management Plan states that approval of actions in relation to the Sydney Opera House site may only be made in accordance with the Management Plan, which defers to the CMP 3rd edition for an assessment of heritage impact of proposals. Refer also to Section 6.3 of this report regarding status of the CMP.

Assessment of these projects against the *Sydney Opera House Accessibility Masterplan 2015* is addressed in the EIS accompanying this application.

3.1 Methodology

This Heritage Impact Statement has been prepared in accordance with the principles and processes of the *Australia ICOMOS Burra Charter 2013*. The preparation of this Heritage Impact Statement also follows the process and model recommended in the NSW Heritage Manual, specifically the NSW Heritage Office guideline *Statements of Heritage Impact* (revised 2002), including consideration of alternative options and their impact.

3.2 Naming of spaces

The naming of some of the projects proposed in this application differs from the conventional naming for their affected spaces, or the names used in the Utzon Design Principles (UDP) and the Conservation Management Plan (CMP 3rd edition). These project names are working titles only and do not imply a re-naming of these spaces. The correlation of these titles / names are as follows:

project / working title / name	conventional name
Under the steps	Vehicle Concourse
Entry Foyer	Box Office Foyer
Joan Sutherland Theatre	Opera Theatre (UDP & CMP 3rd edition)

3.3 Documents reviewed

The following documents prepared by Tonkin Zulaikha Greer Architects (TZG):

Under the Steps

160829 DA ISSUE_UNDER THE STEPS.pdf

Drawings - Sydney Opera House – Front of House – Under the Steps
(cover sheet dated 2 August 2016 – Rev A)

Creative Learning Centre

160829 DA ISSUE_CREATIVE LEARNING CENTRE.pdf

Drawings - Sydney Opera House – Front of House – Creative Learning Centre
(cover sheet dated 9 August 2016 – Rev A)

Southern Foyers

160829 DA ISSUE_SOUTHERN FOYERS.pdf

Drawings - Sydney Opera House – Front of House – Southern Foyers
(cover sheet dated 2 August 2016 – Rev A)

4.0 BRIEF DESCRIPTION OF PROPOSAL

These proposed projects form part of a suite of Renewal Projects across the Opera House site that are intended to upgrade existing performance and patron facilities, create new facilities where space is available, and improve accessibility to as many venues and areas as possible.

They are being designed and programmed to take advantage of staggered closures to enable technical and accessibility upgrades of firstly the Joan Sutherland Theatre, and later the Concert Hall.

The projects in this application are briefly described as follows:

4.1 Under the Steps (Vehicle Concourse)

The proposed 'Under the Steps' project has been made possible by the removal of vehicles from the Forecourt and Vehicle Concourse with the recent completion of the Underground Loading Dock.

The proposal involves the following:

- Removal of existing furniture, Hall's Balls light fittings, and digital display panels;
- removal of the bitumen roadway, precast granite paving panels and traffic island;
- repaving of the whole area with precast pink granite paving panels to the same size, configuration and detail as the broadwalks, but with grouted joints to match the Box Office Foyer, and an arrangement of granite covered power and data trenches;
- construction of a tilted and raised section of paving panels along the southern edge of the concourse space to house services and mask up-lighting, with two long folded weathered brass seating benches for patrons and visitors;
- removal of existing framed digital screens from the northern wall;
- removal of two large sections of precast granite wall panels from the northern wall to expose the off-form concrete behind, and installation of large clear glass digital art walls in their place;
- cleaning of all existing surfaces, especially the folded concrete beams, off-form concrete walls, and remaining precast granite wall panels;
- removal of existing lighting systems between the beams and installation of new service beams incorporating concealed lighting, services, staging anchor points, and acoustic absorption; and
- installation of bronze coloured 'hoop' bicycle racks at eastern end of space.

This project is contained entirely within the existing Vehicle Concourse area although it will be visible from the adjacent northern areas of the Forecourt, Western Broadwalk, stairs and passages leading towards Box Office Foyer and Western Foyer. The increased light levels and the digital art walls will make this concourse area more visible from distant views.

The architects (TZG) have provided the following description for this project:

Function

As the new sub-ground loading dock now enables the removal of vehicles from Under the Steps, the Sydney Opera House has gained a new space that is loaded with potential. The programmatic objectives for this space consist of:

- A new public space taking advantage of the spectacular concrete beams and views of circular Quay and Farm Cove
- A place to exhibit visual and aural art as well as showcasing the events of the Opera House
- Temporary events
- Public seating
- Improved disabled access
- Improved signage
- Maintain emergency service access

These objectives have been achieved with increased lighting to match the foyer lighting, paving to match the Western Boardwalk, two large digital art walls along with concealed power and data to facilitate a range of temporary public events.

Concept

Employing Jørn Utzon's notion of 'learning from nature', the new ground plane will subtly turn up at the base of the underside of the steps. Here, two long seats will be 'carved' into the landform, allowing guests to sit back and look towards the Opera House and harbour.

Echoing the iconic partnering of the Concert Hall (Main Hall) and Joan Sutherland Theatre (Minor Hall) shells above the podium, all new elements Under the Steps will also be paired, such as the new art walls. The art walls will be complimented by soundscapes interpreting the site's aboriginal, geographic, urban and performance heritage.

Comment

Jan Utzon revealed in conversation (November 2015) that his father had contemplated two large murals by modernist masters to be painted beneath the steps, reflecting the dual nature of the Major and Minor Halls.

4.2 Creative Learning Centre

The purpose of this project is to provide dedicated spaces and facilities for education programs and creative learning within the podium. None exist at present.

The proposed Creative Learning Centre will be situated on Broadwalk level (Level +12), at the north-west corner of the building, immediately north of the Western Foyers, and west of the Drama Theatre stage and back stage. This area was originally intended by Utzon as the primary entry to the administration areas but has never operated as such with the main administration area now located on Level +30 north of the Green Room. The project area is presently occupied by administration and associated facilities.

The proposal involves the following:

- Removal of existing fitout designed by Peter Hall, including wall and ceiling white birch plywood 'wobbly' panels;
- modification of recessed entry from Western Broadwalk with entry doors relocated further west to allow an entry lobby with access to spaces north and south, and modified precast paving slabs to provide a step ramp;
- construction of one new pair of bronze framed glass doors to Northern Broadwalk within existing continuous glazed wall;
- cutting of large opening in main curved concrete wall and another in minor north south wall to connect spaces with steel beams over to strengthen openings;
- removal of minor internal walls and partitions to create larger spaces, and facilities;
- modification of existing cupboard storage wall and doors at north end of Western Foyers to provide a new internal public entry to the Creative Learning Centre;
- fitting out of walls and ceilings to spaces adjacent to the Northern Broadwalk with salvaged and re-purposed white birch wobbly panels;
- construction of wall storage units within primary learning space using salvaged white birch wobbly wall panels, finished internally to suit both storage and display;
- construction of storage and facilities elsewhere in spaces utilising salvaged white birch wobbly wall panels;
- construction of new complying WC and other facilities to service learning centre;
- construction of resilient floor finishes in teaching spaces, with existing carpet retained in adjacent admin corridor areas formed by the works;
- fitout of new entry passage with mirrored wall panels and stretched Barisol ceiling lining;
- lining concrete ceilings where exposed with thin acoustic panels, with exposed services below; and
- fitout of suspended ceiling grid over primary learning space to act as a 'fly grid' for teaching theatre.

The architects (TZG) have provided the following description for this project:

Function

The Creative Learning Centre will provide a home at the northern end of the Western Foyer for the innovative interactive learning experience programme that has been developed at the SOH over the last decade.

The programmatic objectives of the Creative Learning Centre consist of:

- Large learning space
- Small learning space with Green Screen capabilities
- Work in progress storage
- Equipment storage
- Lighting and A/V grid to the ceiling
- Acoustic isolation
- Associated WC's and Kitchenette
- Display 'stage' to the Northern Boardwalk
- Access from the Western Foyer and the Western Boardwalk

These objectives have been achieved by forming two principle spaces lined with recycled wobbly storage units. Each space has a lighting and A/V grid located under the new acoustically isolating ceiling.

Both spaces have niches to the Northern Boardwalk which can be screened off.

Concept

The Creative Learning Centre has been thought of as a 'stage' where the magic of stagecraft becomes the basis of learning. The 'stage' is rendered white in order to stand out as a 'container'.

The vast amount of necessary storage joinery has been thought of as stage scenery, different modes playing to the space with various colours and acoustics.

4.3 Southern Foyers

The proposed changes to the Southern Foyers of both the Concert Hall and the Joan Sutherland Theatre (JST) are primarily focussed on the bar and merchandising facilities and on patron comfort. This project is part of a suite of projects intended to improve accessibility and patron comfort throughout the foyer spaces for these two major venues.

The proposal for the Southern Foyers involves the following:

- Modification of the existing brush box auditorium / stage carcasses of both the Concert Hall and JST, to accommodate increased storage and support facilities for enlarged bar and merchandising areas;
- removal of patron seating against the sloping glass walls in side foyers of both the Concert Hall and JST and installation of new furniture against the brush box theatre walls opposite;
- removal of existing circular granite clad bars, associated services and centre lighting 'trees' in both Southern Foyers and repaving to match adjacent precast granite;
- construction of new bars clad with naval brass and glass in both foyers;
- construction of new seating islands for patrons in the Concert Hall Southern Foyer;
- modification of southern glass wall, including removal of one pair of glazed entry doors to JST Southern Foyer to accommodate new Lift 36 from Box Office Foyer; and
- modification of glass wall on eastern side of JST Southern Foyer and installation of one additional pair of glass doors relocated from Lift 36 position.

The architects (TZG) have provided the following description for this project:

Function

The Concert Hall and Joan Sutherland Theatre Southern Foyers are to be reconfigured to improve their visual appearance and efficiency, as well as adding much needed additional seating. The programmatic objectives for this space consist of:

- Improved food and beverages
- Improved show merchandise display
- Increased seating
- Improved disabled access with lifts to the Southern Foyers
- Improved signage and show information
- Tour information screens
- Marketing banner screens

These objectives have been achieved by locating linear and efficient bars to the southern wall of Concert Hall and Joan Sutherland Theatre (JST) and with the introduction of banquette seating to the perimeter of the halls.

A new lift has been discretely integrated into JST Foyer exit doors along with the removal of the Fountain Bars to both of the Southern Foyers.

Working with the timber modules of the giant timber screen walls, digital banners have been carefully incorporated into the structure, in order to display show production information, sponsors, donors as well as tour groups screenings.

Concept

Blackened brass bars with glass tops are voluptuously shaped to echo their extraordinary surroundings. This shaping will, incidentally, accommodate current regulatory and accessibility requirements.

The glass counter tops will display merchandise by night and reflect the surrounds of the Southern Foyers during the day.

Comment

Just as all of the Front of House circulation spaces were envisioned as interconnected by Utzon, the new elements on the different levels share a common material palette of naval brass, and they share the same aesthetic inflections.

5.0 ISSUES & CONSIDERATION OF ALTERNATIVES

It is important to note that the author of this Heritage Impact Assessment has been part of the consultant team providing advice to the architects throughout the development of these proposals and has been part of the discussion on the alternatives explored.

5.1 Under the Steps (Vehicle Concourse)

One of the major objectives for the upgrade of the Vehicle Concourse space has been the desire to increase light levels and decrease the often blinding light contrast from the open east and west ends of the space. There have been lighting upgrades to this area in the past, but none have succeeded in solving this problem. Jørn Utzon had suggested whitewashing the folded concrete beams, however there has been general agreement in the past that this was not preferred; (refer to discussion in Section 11 of this report). Initial proposals by the design team included using a gradual change towards lighter coloured precast floor panels in the centre of the space. The main concern with this solution was that individual panels may be difficult to match and much care would be required to retain the intended tonal configuration in the future. A uniform arrangement of precast granite panels that matched those on the Broadwalks in colour and material was selected as the preferred option. As the light levels change dramatically throughout the day and into the evening, a fully adjustable lighting system is proposed, similar to that recently installed in the Box Office Foyer. With the concrete surfaces cleaned and current lighting technology, considerably improved lighting levels should be able to be achieved throughout the space.

This concourse space has an exposure to winds, particularly from the east and there has been a desire to provide protection against this. Various configurations were explored to insert wind screens at the eastern end of the space, however their configuration, installation and operation (if they are to be retractable) proved problematic and potentially intrusive and this was abandoned.

Various seating configurations were explored, but most were considered distracting and intrusive. The presently proposed broad shallow curved arrangement mirrors the hierarchy and scale between the major and minor halls above.

This hierarchy is also reflected in the scale of the proposed digital art walls on the northern side of the space. The design team originally explored retaining the existing precast granite wall panels and mounting them on pivots to enable them to transform into digital displays when required, however the mechanics and reliability of this system were questioned and it was decided to remove them completely and leave the concrete wall behind exposed behind a clear glass digital screen. Jan Utzon has noted to the design team that his father had considered incorporating major art pieces in these locations.

5.2 Creative Learning Centre

The original concepts for the Creative Learning Centre included proposals for a variety of stage lift type structures that provided considerable flexibility and could be lowered out of sight when not required. These would have involved considerable work below the broadwalk level and were considered too ambitious for this project.

The design team considered a range of options for the fitout, including leaving the spaces as quite raw and stripped out. They ultimately decided to retain and re-use the white birch plywood 'wobblies' to retain consistency with adjacent spaces fitted out with Peter Hall's regime along this very public northern edge of the podium. This system also provided the flexibility required for discrete and organised storage that was clearly identified with the Opera House.

5.3 Southern Foyers

The introduction of the new Lift 36 has been included and assessed in an earlier application (Joan Sutherland Theatre, SAVE & Front-of-House Projects). This proposal involves removal and relocation of one set of existing double doors from the southern glass wall. The total exit widths from this foyer to the Podium platform will be maintained by the relocation of the removed doors to the side of the foyer. Their relocation to the western side of this foyer is shown on the documents, however further considerations suggest this location would provide less patron amenity than the eastern side.

The original circular granite bars in the Southern Foyers have long been augmented by additional bar and server areas against the northern timber panelled walls. These added facilities have been temporary. Opportunities for merchandising associated with performances has also been problematic with tables and display areas set up within the foyers, but then left in place or stored within the space when not in use. Solutions that could accommodate a bar, server, merchandising, and associated storage were explored along the northern panelled walls, where alterations to the configuration of the fabric were considered to have a reduced impact. The existing circular bars were identified as encroaching onto circulation space and could hinder the proper functioning of the new bar. The significance of these circular bars and the impact of their removal is discussed in Section 10 of this report.

6.0 HERITAGE LISTINGS & STATUTORY FRAMEWORK

6.1 Listings

The Sydney Opera House is listed on the following statutory registers:

- World Heritage List (UNESCO) 2007
- National Heritage List (Australian Government) 2005
- State Heritage Register (NSW Government) 2003
- Sydney Local Environmental Plan 2005 (City of Sydney Council)

The Sydney Opera House is listed on the following non-statutory heritage registers:

- National Register of Significant 20th Century Buildings (Australian Institute of Architects)
- National Trust of Australia (NSW) register
- Register of the National Estate (archived list with the Australian Heritage Council)

6.2 Statutory framework

The statutory framework for approvals for the Opera House is presently as follows:

Commonwealth: *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)

- Part 3, Division 1, identifies Commonwealth requirements relating to World Heritage properties and National Heritage places.
- Approval must be obtained from the Commonwealth Minister for the Environment for actions that are likely to have a significant impact on matters of national environmental significance (including National and World Heritage sites) under the EPBC Act.
- The Sydney Opera House site was subject to a bilateral agreement between the Australian Government and the State of New South Wales made in 2005 pursuant to Section 45 of the EPBC Act however this expired in 2010. Under the terms of that agreement (Clause 8.1), an action taken at the Sydney Opera House site would not require the approval of the Commonwealth Minister for the Environment, Heritage and the Arts where:
the taking of the action has been approved by the State of New South Wales or an agency of New South Wales in accordance with the Management Plan for the Sydney Opera House ...

State (Planning): *Environmental Planning and Assessment Act 1979* (**EP&A Act**) and *State Environmental Planning Policy (State and Regional Development) 2011*

- All development on land identified as being within the Sydney Opera House site is designated as State significant development (**SSD**) (Schedule 2) that requires consent under the EP&A Act.
- The Minister for Planning is the consent authority for SSD.

State (Planning): *Environmental Planning and Assessment Regulation 2000* (**Regulation**)

- Clause 288 of the Regulation requires the consent authority to take into consideration the *Management Plan for the Sydney Opera House* (prepared 2005 as part of the bilateral agreement negotiations) in relation to development on the Sydney Opera House site. The Management Plan references the CMP and the Utzon Design Principles.
- The Management Plan provides a framework for protection of the World and National Heritage values of the Sydney Opera House site and has been endorsed by the Heritage Division, Department of Planning (formerly the NSW Heritage Office).
- The Management Plan states that approval of actions in relation to the Sydney Opera House site may only be made in accordance with the Management Plan, which defers to the CMP 3rd edition for an assessment of heritage impact of proposals.

State (Planning): *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* (**REP**)

- The Opera House site falls within the Sydney Harbour Catchment area designated in the REP. It also is within the Foreshores and Waterways area and is designated as a Strategic Foreshore Site.
- The REP sets out a number of considerations that must be taken into account when submitting a DA (see clauses 13-15; Division 2 of Part 3 and Part 5 of the REP).

State (Heritage): *Heritage Act 1977*

- An approval from the Heritage Council under section 60 of the Heritage Act is required for development on the Sydney Opera House site. Where the development has been approved as SSD, the approval under section 60 of the Heritage Act cannot be refused by the Heritage Council.

6.3 Conservation Management Plan (CMP) status

The CMP 3rd edition has been formally endorsed by the authorities and is the version that has formal standing in any statutory assessment or approval.

The draft CMP 4th edition retains and expands on the philosophical approach and policies of the 3rd edition, providing more detail on many aspects. It has also been updated to include the World Heritage Listing and consequent obligations. This draft has been on public exhibition and then reviewed by the NSW Heritage Division and via a rigorous peer review process, but has not yet been finalised or formally endorsed by the authorities. The assessment in this HIS is based on the 3rd edition, but informed by knowledge gained in preparing the 4th edition. The impacts on World, National and State heritage values are discussed separately to the CMP.

7.0 IMPACT ON WORLD HERITAGE VALUES OF THE SYDNEY OPERA HOUSE

In 2007, the Sydney Opera House was inscribed on UNESCO's World Heritage List (WHL) for its Outstanding Universal Value (OUV) as a "masterpiece of human creative genius" under criterion (i) of the Operational guidelines for the implementation of the World Heritage Convention.

The Sydney Opera House was inscribed on the WHL for the values noted in the inscription below. ***Emphasis added*** on aspects of significance relevant to the assessment of heritage impact of the works in this current application.

Outstanding Universal Values

The Sydney Opera House constitutes a masterpiece of 20th century architecture.

Its significance is based on its unparalleled design and construction; its exceptional engineering achievements and technological innovation and its position as a world-famous icon of architecture. It is a daring and visionary experiment that has had an enduring influence on the emergent architecture of the late 20th century. Utzon's original design concept and his unique approach to building gave impetus to a collective creativity of architects, engineers and builders. Ove Arup's engineering achievements helped make Utzon's vision a reality. The design represents an extraordinary interpretation and response to the setting in Sydney Harbour. The Sydney Opera House is also of outstanding universal value for its achievements in structural engineering and building technology. The building is a great artistic monument and an icon, accessible to society at large.

Criterion (i)

The Sydney Opera House is a great architectural work of the 20th century. It represents multiple strands of creativity, both in architectural form and structural design, a great urban sculpture carefully set in a remarkable waterscape and a world famous iconic building.

Comment

The proposed works to the Vehicle Concourse, Southern Foyers, and new Creative Learning Centre will have negligible impact on the architecture and setting of the Opera House. The improved amenity in affected areas should enhance the standing of the Opera House as an architectural icon.

The unique structural systems and technology that were developed for the folded and cranked beams and prefabricated ribbed shell structures remain unaffected by the proposed works and the improved lighting and patron facilities will enable visitors and patrons to better appreciate these.

The Creative Learning Centre will enhance the ability of the Opera House to engage with and promote the performing arts to younger generations.

In conclusion, it is considered that the proposed works in this application will have a positive impact on the Outstanding Universal Values that enshrine Sydney Opera House on the World Heritage List.

8.0 IMPACT ON NATIONAL HERITAGE VALUES OF SYDNEY OPERA HOUSE

The following is the Summary Statement of Significance of the National Heritage values of the Sydney Opera House. *Emphasis added* on aspects of significance relevant to the assessment of heritage impact of the works in this current application.

The Sydney Opera House, constructed between 1957 and 1973, is a masterpiece of modern architectural design, engineering and construction technology in Australia. It exhibits the creative genius of its designer, the Danish architect Jørn Utzon and the contributions to its successful completion by the engineering firm Ove Arup and Partners, the building contractors M.R. Hornibrook, and the architects Hall, Todd and Littlemore. It is an exceptional creative and technical achievement in the national history of building design and construction in Australia.

Since its completion the Sydney Opera House has attracted world wide acclaim for its distinctive design, enhanced by its prominent location on Bennelong Point within a superb harbour setting. With its soaring white roof shells set above a massive podium, the Sydney Opera House is a monumental urban sculpture, internationally acclaimed as an architectural icon of the twentieth century. Its many national and international awards reflect its pivotal place in the national story of creative and technical achievement in Australia. The challenges involved in executing Utzon's design inspired innovative technical and creative solutions that were groundbreaking in the history of architectural design and building construction in Australia, particularly the roof shells that were based on the geometry of the sphere and demonstrated the extraordinary creative potential of the assembly of prefabricated, repeated components.

The interior spaces also reflect the creative genius of Utzon and his successors, Todd, Hall and Littlemore, who completed the building after Utzon's departure from the project in 1966.

The Sydney Opera House is the most widely recognised building in Australia, and is cherished as a national icon and world-class performing arts centre. It represents an enduring symbol of modern Sydney and Australia, both nationally and internationally, reflecting changing social attitudes towards Australian cultural life in the decades after World War II. The Sydney Opera House has played a seminal role in the development of Australia's performing arts, enhancing the cultural vitality of the nation. It continually attracts nationally and internationally acclaimed performers, and is a mecca for visitors from around Australia and overseas.

The peninsula on which the Sydney Opera House now stands has a special association with Bennelong, an Aboriginal man who became a prominent and influential figure in the early colony and played a significant role in mediating interactions between Aboriginal people and early settlers.

Comment

The proposed works to the Vehicle Concourse will considerably enhance the public amenity of this space and install facilities that will allow it to be used for occasional simulcasts and performances. The works also remove a number of intrusive items. The works will provide

enhanced facilities for public appreciation of its iconic architectural and structural features and strengthen its role as a major arrival foyer in Utzon's approach and arrival sequence.

Proposed works to the Southern Foyers will consolidate bar and merchandising facilities and improve the functional amenity of these spaces. The works will remove the circular bars designed by Peter Hall (assessed in the CMP as having some, but not high significance), but this will achieve a less cluttered space and assist the efficient function of these exceptionally significant arrival spaces. This will strengthen the core function of the Opera House as a performing arts centre and provide greater opportunity for public appreciation of its iconic architecture and structure.

The Creative Learning Centre will retain and respect the significant contribution of Peter Hall and enhance the ability of the Opera House to engage with and promote the performing arts to younger generations.

In conclusion, it is considered that the projects proposed in this application will have a positive impact on the National values of the Opera House.

See the more detailed listed values of the place under the individual National Heritage criterion below.

8.1 National Heritage criteria

The Sydney Opera House is registered on the National Heritage List for meeting its listing criteria A, B, E, F, G and H. The values of the Sydney Opera House that meet the National Heritage criteria are set out in full in Appendix C of the Management Plan for the Sydney Opera House (August 2005) and also in the listing of the Sydney Opera House on the National Heritage List, available at <http://www.deh.gov.au/cgi-bin/ahdb/search.pl>

The extracts from the National Heritage values, under each of the criterion below, summarise and draw attention to the aspects of significance that are relevant to the assessment of heritage impact of this suite of projects.

NHL Criterion A Events, Processes

The place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history.

Relevant key values from National Heritage values:

- "The Sydney Opera House represents a masterpiece of modern architectural design, engineering and construction technology in Australia."
- "It is a national icon that has become an internationally-recognised symbol of modern Australia and of Sydney, Australia's largest city"
- "The challenges involved in executing the design inspired innovative developments in technologies, construction engineering and building methods in Australia, creating the building's distinctive form, fabric and structural systems."
- "a seminal role in Australia's performing arts history, enhancing the cultural vitality of the nation and continuously attracting nationally and internationally recognised performers from around the world"

Comment

The proposed works to the Vehicle Concourse, Southern Foyers, and new Creative Learning Centre will have no adverse impact on these values.

These projects will strengthen the core function of the Opera House as a performing arts centre and provide greater opportunity for public appreciation of its iconic architecture, structure and Utzon's arrival sequence of spaces.

The Creative Learning Centre will retain and respect the significant contribution of Peter Hall and enhance the ability of the Opera House to engage with and promote the performing arts to younger generations.

NHL Criterion B Rarity

The place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history.

Relevant key values from National Heritage values:

- "The Sydney Opera House is a cultural icon that has no counterpart in Australia. With its distinctive sail-like concrete shell roofs standing boldly upon a massive granite-faced platform, located prominently on the Sydney Harbour foreshore, the Sydney Opera House is the most widely recognised building in Australia, and one of the most definitive national architectural icons of the twentieth century. It is also a rare example of a national cultural centre that has gained widespread recognition and respect as a performing arts venue."

Comment

The projects included in this application provide greater opportunity for public appreciation of the Opera House's iconic architecture and will not have any adverse impacts on these values.

NHL Criterion E Aesthetic characteristics

The place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group.

Relevant key values from National Heritage values:

- "The building's ability to emotionally move people and invoke a strong aesthetic response is enhanced by the experience of approaching, entering and moving around the building and surrounds."
- "...prepare the visitor for the majestic quality of the soaring internal spaces including the folded concrete beams throughout the building, and the reinforced radial cranked beams in the northern foyers. These are complemented by the vast coloured glass panels in the main foyers of the Concert Hall and Opera Theatre wings, through which the harbour and city views reinforce the building's magnificent setting."
- "The distinctive interiors including the foyers surrounding the major auditoria,designed by Utzon and Peter Hall, enhance the relationship between the interior and exterior of the building."

Comment

The proposed works to the Vehicle Concourse and Southern Foyers will considerably improve the public amenity of these space and remove a number of intrusive items. The works will provide enhanced facilities for public appreciation of the majestic qualities of these spaces and their role in Utzon's approach and arrival sequence. The proposed introduction of a new lift within the alignment of the southern glass wall of the JST foyer, and relocation of an entry door will further enhance public experience of this signature foyer space.

The Creative Learning Centre will retain and respect the significant contribution of Peter Hall and enhance the ability of the Opera House to engage with and promote the performing arts to younger generations.

NHL Criterion F Creative or technical achievement

The place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.

Relevant key values from National Heritage values:

- "In every aspect it is a structure at the leading edge of endeavour.
- "The 'hybrid' interior spaces of the Sydney Opera House reflect the creative genius of both Utzon and Todd, Hall and Littlemore, who completed the building and interior finishes after Utzon's departure. The major public spaces with outside views, for example were designed by Utzon (and completed by Peter Hall) to be finished in natural materials, textures and colours similar to those on the exterior of the building in order to bring the outside inside (Kerr 2003, 69)."
- "the creation of sensory experiences to bring pleasure to the building's users, particularly the experience of approaching, mounting the grand staircase to the podium, passing through the low ribbed box office, up to the foyers flanking the auditoria with their harbour views, and the climax of the performance itself. 'Both ideas were...reinforced by Utzon's application of counterpointing techniques using light and dark tones, soft and hard textures and richly treated warm and cool interior colours.'"
- "The interior spaces designed by Peter Hall, including performers' and staff areas, known collectively as 'Wobbly Land' because of the distinctive 'U' shaped timber panelling, demonstrate the distinctive design solutions that made the Opera House a functioning performing arts centre in the 1970s, and reflect the prevailing aesthetic values, building standards, and financial constraints of the day."

Comment

Public appreciation of the leading edge architectural and structural achievements at the Opera House will be enhanced by these projects, particularly with the removal of clutter and the upgrading of lighting and patron facilities. In addition, the original Utzon concepts for the approach and arrival spaces will be made more evident by these works.

The proposal to retain and strengthen significant features by both Utzon and Hall, including unpainted off-form concrete walls and the white birch moulded timber 'wobbly' panels, will retain and respect these national values.

NHL Criterion G Social value

The place has outstanding heritage value to the nation because of the place's strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.

Relevant key values from National Heritage values:

- "building's role as a cultural icon is also derived from the numerous performances conducted there (100,000 since 1973), and the place's role as a focal point for community events. The Sydney Opera House is a mecca for both Australian and international visitors to Sydney, attracting over 100 million visitors since the opening in 1973."

Comment

The proposed projects in this application will strengthen the core function of the Opera House as a performing arts centre and provide greater opportunity for public appreciation of its iconic architecture and structure.

The Creative Learning Centre will enhance the ability of the Opera House to engage with and promote the performing arts to younger generations.

NHL Criterion H Significant people

The place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history.

Relevant key values from National Heritage values:

- "The Sydney Opera House is directly associated with Jørn Utzon"

Comment

The proposed suite of projects will provide greater opportunity for visitors and patrons to appreciate Utzon's genius and inspired design and will not have any adverse impacts on these values.

8.2 Summary assessment of heritage impact on National Heritage values

The proposed works in the Vehicle Concourse, Southern Foyers and Creative Learning Centre will have negligible impact on the external architecture and setting of the Opera House.

Proposed internal alterations to the original structure to form the main spaces for the Creative Learning Centre affect some structure within the Podium but not the unique folded and cranked beams or the ribbed shell roof structure. Further refinement of the design of these alterations should be undertaken to minimise potential impacts in the design development stage.

These projects will strengthen the core function of the Opera House as a performing arts centre and provide greater opportunity for public appreciation of its iconic architecture and structure.

In summary, the proposed projects in this application will not have any adverse impact on the national heritage values of the Opera House.

9.0 IMPACT ON STATE HERITAGE VALUES OF THE SYDNEY OPERA HOUSE

The CMP 3rd edition is used as the basis for discussion and assessment of the heritage impact of the proposed projects on the State Heritage values of the Sydney Opera House.

The following is the Statement of Significance of the State Heritage values of the Sydney Opera House. ***Emphasis added*** on aspects of significance relevant to the assessment of heritage impact of this project.

*The Sydney Opera House is of State significance as a twentieth century architectural masterpiece sited on a prominent peninsular in Sydney Harbour. In association with the Sydney Harbour Bridge it has become an internationally recognised symbol of Sydney and Australia, which is also widely admired by local citizens. Designed for the NSW Government by renowned Danish architect Jørn Utzon between 1957 and 1966, and completed in 1973 by Hall, Todd and Littlemore, the building has exceptional aesthetic significance because of its quality as a monumental sculpture in the round, both day and night, and because of the appropriateness of its design to its picturesque setting. ***Its public spaces and promenades have a majestic quality, endowed by powerful structural forms and enhanced by vistas to the harbour and the city.*** An icon of modern architecture, the Sydney Opera House uses the precise technology of the machine age to express organic form. It has scientific and technical significance for the ways in which its construction continually pushed engineering and building technologies to the limit. It also has significance for the extensive*

*associations of the site with many famous people and important themes in Australian history. Abutting the site of the first settlement of Europeans in Australia at Sydney Cove, the Sydney Opera House stands on Bennelong Point, Aboriginal land which was named after a Wangal Aboriginal man and which is of significance in the history of the entanglements and interactions between Aboriginal and non-Aboriginal cultures in Australia. Other historic themes associated with the site include the arrival of the First Fleet in Sydney Cove, scientific investigation, defence, picturesque planning, marine and urban transport and most recently, cultural showcasing. Since its official opening by the Queen in 1973, the Sydney Opera House has been the scene of many notable achievements in the performing arts and has associations with many nationally and internationally renowned artistic performers. **The Sydney Opera House provides an outstanding visual, cultural and tourist focal point for Sydney and Australia.***

Comment

The proposed projects include works to the Vehicle Concourse and Southern Foyers – exceptionally significant public spaces defined by majestic and powerful structural forms. These qualities will be enhanced by the proposed works with the removal of clutter, provision of improved patron access, amenity and comfort, and improved lighting.

Along with the proposed Creative Learning Centre, these projects will strengthen the identity of the Opera House as a nationally important visual, cultural and tourist focus.

9.1 State Heritage Register criteria

The Sydney Opera House is listed on the SHR for meeting all its listing criteria (a)-(g). The values of the Sydney Opera House that meet the SHR criteria are set out in full in the NSW Heritage Database, available online at:

<http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=5054880>

The extracts from the SHR values, under each of the criterion below, summarise and draw attention to those aspects of significance that are relevant to the assessment of heritage impact of the suite of proposed projects in this application. Design 5's assessment of heritage impact is summarised at the end of this section.

SHR criterion a) Historical significance

An item is important in the course, or pattern, of NSW's cultural or natural history.

Relevant key values from SHR values:

- The Sydney Opera House has historical significance as a modern architectural masterpiece, recognised internationally as a symbol of Sydney and Australia,

Comment

No significant historical values from the SHR listing are impacted by this proposal.

SHR criterion b) Associative significance

An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history.

Relevant key values from SHR values:

- "its success as a performing arts centre has been described as 'spectacular' partly because of the building's 'ability to attract great artists from all over the world'."

Comment

The ability of the Sydney Opera House to attract great artists from all over the world could be enhanced by these projects by the improved amenity and patron comfort offered by the proposed works. This has a direct and positive impact on the reputation of the Opera House as a performing arts venue.

SHR criterion c) Aesthetic significance

An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW.

Relevant key values from SHR values:

- "Its public spaces and promenades have a majestic quality endowed by powerful structural forms and enhanced by vistas to the harbour and the city."
- "Its aesthetic quality is largely attributed to the 1957 prizewinning design by Jørn Utzon."
- "Its aesthetic quality was also enhanced by the high quality completion work by Hall, Todd & Littlemore, by the technical support given throughout by the internationally renowned engineering firm of Ove Arup & partners, and finally by M.R. Hornibrook, the contractor of stages two and three (Kerr, 2003, 32)."

Comment

The values listed above for public spaces will be enhanced by the proposed works and improve opportunities for patrons and visitors to appreciate them.

The proposal to retain and highlight significant features by both Utzon and Hall, including folded concrete beams, unpainted off-form concrete walls and the white birch moulded timber 'wobbly' panels, will retain and respect these values.

SHR criterion d) Social significance

An item has strong or special association with a particular community or cultural group in NSW for social, cultural or spiritual reasons.

Relevant key values from SHR values:

- "The Sydney Opera House is of social significance as an internationally recognised symbol of Sydney, one of Australia's leading tourist attractions and a focal point for community events. It is also widely admired by Sydneysiders, and can be seen to contribute importantly to the sense of place in the Sydney CBD."
- "As a world-class performing arts centre, the Sydney Opera House has enhanced the cultural vitality of the nation."
- "In offering this remarkable accessibility to a broad public, Sydney Opera House can be seen to be fulfilling Cahill's hope that it would be "a monument to democratic nationhood"."

Comment

The projects proposed in this application will improve the ability of the Opera House to cater for tourists as well as patrons, and engage them in a diverse range of performing arts activities at the house. This includes children.

These will be achieved by:

- provision of generous and elegant seating in the Vehicle Concourse and Southern Foyers,
- upgraded lighting and floor finishes in Vehicle Concourse to enhance quality of space,
- more open and functional Southern Foyers with removal of the circular bars and

provision of consolidated bar and merchandising facilities against the brush box stage wall cladding,

- removal of a number of precast granite wall cladding panels and provision of transparent digital art walls to enliven the Vehicle Concourse and facilitate simulcasts and other projections,
- provision of discrete support infrastructure for occasional performances or events in Vehicle Concourse,
- and a purpose built Creative Learning Centre.

These works will enhance public accessibility and strengthen the important role of Sydney Opera House in the cultural vitality of the nation.

SHR criterion e) Research potential

An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history.

Relevant key values from SHR values:

- none relevant

Comment

There are no significant research potential values identified from the SHR listing that are impacted by this proposal.

SHR criterion f) Rarity

An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history.

Relevant key values from SHR values:

- "It is also unique in so far as it has become an internationally recognised symbol of Sydney and Australia, which is also widely admired by local citizens."

Comment

The ability of the Sydney Opera House to attract visitors and performers from all over the world will be enhanced by these projects by the improved amenity, accessibility and patron comfort offered by the proposed works.

SHR criterion g) Representativeness

An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments.

Relevant key values from SHR values:

- "It is outstanding because of its innovative design appropriate both to its entertainment functions and to its harbour-side setting, and because of the esteem in which it is held in Australia and internationally."
- "Its success as a performing arts centre has been described as 'spectacular' partly because of the building's 'ability to attract great artists from all over the world'."

Comment

Like the rarity values discussed above, the ability of the Sydney Opera House to attract visitors and performers from all over the world will be enhanced by these projects by the improved amenity, accessibility and patron comfort offered by the proposed works. This will in turn enhance the esteem in which it is held nationally and internationally.

9.2 Summary assessment of heritage impact on State Heritage values

The projects proposed in this application will affect the Vehicle Concourse and Southern Foyers and provide a dedicated Creative Learning Centre. These projects will improve the ability of the Opera House to cater for tourists as well as patrons, and engage them in a diverse range of performing arts activities at the house, including for children.

These will be achieved by:

- provision of generous and elegant seating in the Vehicle Concourse and Southern Foyers,
- upgraded lighting and finishes in Vehicle Concourse to enhance majestic qualities of space,
- more open and functional Southern Foyers with removal of the circular bars and provision of consolidated bar and merchandising facilities against the brush box stage wall cladding,
- removal of a number of precast granite wall cladding panels and provision of transparent digital art walls to enliven the Vehicle Concourse and facilitate simulcasts and other projections,
- provision of discrete support infrastructure for occasional performances or events in Vehicle Concourse,
- and a purpose built Creative Learning Centre.

There are relatively limited impacts on the glass walls surrounding the JST Southern Foyer, precast cladding in the Vehicle Concourse, and moderately significant structure within the podium. The most significant impact will be the removal of the moderately significant circular bars in the Southern Foyers. All of these impacts are considered acceptable and none will affect the state significant values of the place.

In summary, these works will enhance public accessibility and appreciation of Sydney Opera House and strengthen its important role in the cultural vitality of the nation.

The assessment of heritage impact on individual spaces and fabric is discussed in the section below (compliance with CMP 3rd edition).

10.0 COMPLIANCE WITH SYDNEY OPERA HOUSE CONSERVATION PLAN (CMP) 3RD EDITION

The CMP 3rd edition was developed in preparation for the listing of the Sydney Opera House on the NSW State Heritage Register (SHR) in 2003. The CMP draft 4th edition has retained and further developed the methodology and policies in the 3rd edition, however it has not yet been formally adopted and is not therefore used for this assessment. Refer to discussion in Section 6.03.

The CMP identifies and defines the significant values of the Sydney Opera House and then formulates policies framed to retain these values. The following discussion assesses the impact of the proposed suite of projects in the following order:

- Significant values,
- Significant elements of the place, and
- Relevant policies.

10.1 Significant values – discussion of impact

The following Statement of Significance from CMP 3rd edition summarises the significant values of the place (emphasis in bold type added as it relates to this assessment):

The Sydney Opera House is a dramatic expression of the genius of a then relatively unknown architect, Jørn Utzon (whose subsequent international fame was in part a result of the design of the building), of the high quality completion of the work by Hall, Todd and Littlemore, and of the technical support given throughout by the internationally renowned engineering firm of Ove Arup and Partners and finally by M.R. Hornibrook, the inventive contractor of stages two and three.

The Sydney Opera House is of exceptional significance because of:

- its spectacular quality as sculpture in the round both by day and night;
- its inspired design solution in response to its setting;
- the picturesque quality of the peninsula setting;
- the way in which its fabric reflects the contemporary philosophy of creating refined forms from machine-made components;
- **the way in which the plastic arts, geometry and technology were drawn on to create a structure at the leading edge of endeavour;**
- **the majestic quality of its public spaces contained by powerful structural forms;**
- **the evidence of its fabric in expressing its place in twentieth century architecture (not excluding the troubled history of its construction);**
- **the seminal influence of some of its design and construction techniques;**
- **its function as a performing arts centre of world renown;**
- **its almost mythological status as a cultural icon (then and now) arising from all the above, from the high public interest in its protracted and controversial development; and from its power to attract artists, patrons and tourists on a national and international level.**

This significance is intensified by the extensive associations of the site and its structures, including:

Aboriginal and European contact (Bennelong and his house); scientific investigation (Flinders and Baudin); defence (Phillip's 1788 redoubt to Greenway's Fort Macquarie, 1817–1901); Picturesque planning (Macquarie to Utzon); marine and urban transport (overseas shipping and local ferry wharves, tram terminal and depot); popular recreation; and, finally, the nation's most famous cultural icon (The Opera House) and its legions of national and international performers.

Those values noted above in bold type are relevant to the proposed projects. Taking each of them separately, the following comments are made:

The Sydney Opera House is a dramatic expression of the genius of a then relatively unknown architect, Jørn Utzon (whose subsequent international fame was in part a result of the design of the building), of the high quality completion of the work by Hall, Todd and Littlemore, and of the technical support given throughout by the internationally renowned engineering firm of Ove Arup and Partners and finally by M.R. Hornibrook, the inventive contractor of stages two and three.

Comment:

The proposed works in this application retain and respect the collaborative work of the original architect, engineers and contractors, as well as the work of those who completed the project after Utzon's departure. A number of aspects to these proposals will considerably enhance these works, particularly with upgraded lighting.

- **the way in which the plastic arts, geometry and technology were drawn on to create a structure at the leading edge of endeavour;**
- **the majestic quality of its public spaces contained by powerful structural forms;**

Comment:

The folded concrete beams in the Vehicle Concourse and the soaring shell ribs over the Southern Foyers will be celebrated in these proposals.

- *the evidence of its fabric in expressing its place in twentieth century architecture (not excluding the troubled history of its construction);*
- *the seminal influence of some of its design and construction techniques;*

Comment:

Wherever possible in these projects, the evidence of evolution and manufacture of its fabric is retained and exposed. The presence and character of this fabric will be enhanced by improved lighting in the Vehicle Concourse, and appreciation of this fabric by additional seating in both the Vehicle Concourse and Southern Foyers.

- *its function as a performing arts centre of world renown;*

Comment:

The proposed works will enhance the primary function of the place and create additional opportunities for the use of the Vehicle Concourse for occasional performance and simulcast. The Creative Learning Centre will strengthen and enhance the role of the Opera House in promoting the performing arts to younger generations.

- *its almost mythological status as a cultural icon (then and now) arising from all the above, from the high public interest in its protracted and controversial development; and from its power to attract artists, patrons and tourists on a national and international level.*

Comment:

The improved amenity for visitors, patrons and performers proposed in these projects will enhance the status of the Opera House as a performing arts centre and cultural icon.

10.2 Significant elements – discussion of impact

Broadly the elements and areas listed below (following the main headings in the *Schedule of levels of significance* in the CMP 3rd edition), will be potentially affected to varying degrees by the proposed works:

- Topographical setting – significance ranking A
- Forecourt – significance ranking A
- Broadwalk – significance ranking A
- Furniture of forecourts and broadwalk
- External lighting
- Form, fabric and structural systems of the Opera House – significance ranking A
- Podium exterior – significance ranking A
- Original concept of sequential experiences on arrival, entry and circulation – significance ranking A
- Vehicle concourse – significance ranking A
- Four stairways from vehicle concourse to Box Office – significance ranking A
- Box Office foyer – significance ranking A

- Foyers surrounding the major auditoria – significance ranking A
- Original administration reception area, corridor and suites with wobbly treatment on level 12 north of the Drama Theatre – significance ranking C
- Amalgamated foyers for Playhouse, Studio and Drama Theatre at Broadwalk level (Western Foyers)
- Central vehicle passage space, level 12 – significance ranking B

Each element is discussed below in relation to this proposal. At the end of each discussion section a table sets out the components of each element, where relevant, and their significance as listed in the CMP, with comments on the impact on each. The significance rankings are taken from the CMP 3rd edition and are as follows:

- A – Exceptional significance
- B – Considerable significance
- C – Some significance
- D – Little significance
- Int – intrusive element

10.2.1 Topographical setting

The topographic setting of Sydney Opera House remains substantially unaffected by the projects proposed in this application. The only possible impact could be from increased lighting levels from the Vehicle Concourse, and the potential visibility of its two digital display screens from longer views towards the Opera House.

Increased lighting levels in the Vehicle Concourse while possibly more noticeable during daylight, should not have a negative impact on the setting.

The proposed digital display screens could potentially be more distracting due to their size, particularly in the evening, although from their location deep inside the concourse space, they are unlikely to be too noticeable. Tests should confirm if they are likely to be a problem, and if so, the technology exists to reduce their visibility from oblique angles. Potentially negative impacts from this visibility could also be mitigated by careful programming of content on the screens.

The proposed additional door on the northern side of the Podium for the Creative Learning Centre will not be noticed in the broader setting.

Similarly the minor changes to the glass wall of the JST Southern Foyer to accommodate the relocated door from the southern glass wall, respect the general alignment of the glass and occur below the main bronze transom. They will not be noticed in the broader setting.

10.2.2 Forecourt

The Forecourt itself remains unaffected by these three projects, however the works proposed in the Vehicle Concourse will be visible from the east and west sides of the northern section of the Forecourt.

The improved lighting levels within the concourse will enhance this important entry space and invite exploration when viewed from the Forecourt.

The proposed large digital display screens will attract attention from those that can see them from the Forecourt. This should not be a negative impact, but could be a distraction in the evenings when surrounding light levels are lower. Programming on these screens will be an important factor in mitigating any potentially negative impacts.

10.2.3 Broadwalk

The Vehicle Concourse space is visible from the southern ends of the Eastern and Western Broadwalks but their fabric remains unaffected by this proposal.

The comments made above in relation to setting and Forecourt apply equally here.

10.2.4 Furniture of forecourts and broadwalk

Apart from the two brass bench seats along the southern edge of the Vehicle Concourse, furniture items associated with the occasional event use of this space do not form part of this application. It is noted that the existing fibreglass seating and the Hall's Balls light fittings within the concourse area will be removed with these works

Selection of any furniture or other infrastructure to be used within the space as part of any event or occasional activity, should be subject to the same selection criteria and scrutiny that applies to the Forecourt and Broadwalk and adhere to the Utzon Design Principles and the CMP.

An important principle is that there should be no potted plantings. This is a man made peninsular and Utzon specifically advised that there be no soft landscaping. Green synthetic turf should also be avoided for the same reason.

10.2.5 External lighting

The only possible impact could be from increased lighting levels from the Vehicle Concourse, and the potential visibility of its two digital display screens in views towards the Opera House.

Increased lighting levels in the Vehicle Concourse while possibly more noticeable during daylight, should have a positive impact on the appreciation of this dramatic arrival space, attractive visitors to explore it further. This will be considerably enhanced by the proposed removal of the bitumen roadway, make it clearly a fully pedestrian space. Achieving appropriate lighting levels relative to other external areas and highly lit areas will be important. The generally darker quality of the Podium exterior and the dominance of the subtly lit tiled shells above must be retained and respected in all views towards the building.

The proposed digital display screens could potentially be distracting due to their size, particularly in the evening, although from their location deep inside the concourse space, they are unlikely to be too noticeable. It is important that they not become visually loud and distracting advertising panels. Tests should confirm if they are likely to be a problem, and if so, the technology should be used to reduce their visibility from oblique angles and if necessary, programming of digital content adjusted to mitigate any potentially negative impacts.

10.2.6 The form, fabric and structural systems of the Opera House

There are a number of elements that are affected by the projects in this application. They are discussed below in relation to each project.

Under the Steps

The Vehicle Concourse space (Under the Steps) is defined by the impressive folded concrete beams supporting the monumental steps and podium above. The proposal to install lighting and service beams throughout this space to substantially increase both concealed up-lighting

and ambient lighting of these beams will dramatically enhance their presence and appreciation, both by day and night. An increased number of fixings will be required for their attachment, however it is essential that these be executed in 316 grade stainless steel, bronze, or other non-corrosive, non-ferrous material and done with minimal damage to the concrete. Maintaining integrity of the waterproofing membrane above is also essential.

The north walls to the Vehicle Concourse are structurally important off-form concrete supporting the beams above and are largely concealed behind precast granite panels leaving only a narrow band of concrete exposed above. The proposed removal of two large but contained areas of precast panels to expose the original concrete and place transparent digital display walls will be a dramatic but potentially positive intervention in this space. The quality and character of this digital display wall is largely dependant on it being transparent (as proposed in the DA documents), allowing the significant structure behind to remain visible. If these screens were not to be transparent, their positive impact on understanding and appreciating this significant structure would be considerably reduced.

The removal of the bitumen roadway and installation of precast pink granite paving panels throughout the Vehicle Concourse is a very positive impact.

Creative Learning Centre

The proposed structural works in the Creative Learning Centre and their impacts are noted below.

- Removal of a large section of a major curved loadbearing wall below approx. 3m, retaining nibs on each side, to create the primary learning space. This opening will require additional strengthening at the lintol and this is presently indicated as steel. Detail resolution of this opening should be refined in the documentation stage to minimise any potentially negative impacts and retain the integrity of this important concrete element. This will have a moderate but acceptable impact on significant structure within the Podium.
- Removal of a number of less significant walls and adjacent walls south of western entry to house the digital learning space and other facilities. These will have moderate but acceptable impacts on original structure and fabric.

Southern Foyers

The proposed works to the Southern Foyers do not involve any changes to the concrete or roof shell structure, but do include isolated alterations to the side glass wall of the JST Southern Foyer.

One of the bronze framed doorcases will be removed from the southern glass wall to the JST to accommodate the new Lift 36. This lift was part of an earlier Development Application for the Box Office Foyer (referred to as the 'Entry Foyer'). The removed doorcase will be relocated to a side glass wall – presently indicated on the drawings as the western side, but recent considerations suggest it would be better placed on the eastern side, immediately south of the existing glass doors from this foyer. Refer to discussion regarding Southern Foyers in 10.2.12 below.

Regardless of whether it be the west or east glass wall, these relocated doors will sit below the large bronze transom and extend an existing door enclosure. They will be hardly noticed and should not appear intrusive or distracting. All external and internal metal elements are proposed to be finished in bronze, matching existing details. All new or altered external glass should match the existing glass wall.

Generally, carefully placed minor alterations such as these below the bronze transom are considered acceptable as they do not interfere with the dominant glass walls above.

Element	Significance	Potential impact of proposal	Comment
The form, fabric and structural systems of the Opera House, including	A		
roof shells with pedestals, ribs, boxed beams, warped surfaces, tile lids and lightning conductors	a	none	Not affected by proposal
bronze louvre walls infilling shell ends	a	none	Not affected by proposal
podium clad and paved with monumental precast granite	a	low – positive	Removal of sections of the precast wall cladding in Vehicle Concourse for the digital display walls will have minimal impact on the quality and character of the podium. Continuation of the precast paving to fully cover the floor of the concourse will strengthen its integration with the podium – positive impact.
folded beams throughout the building	a	low – positive	Not physically altered by proposal. Improved lighting within the Vehicle Concourse will highlight and celebrate these signature elements – positive impact.
reinforced radial cranked beams in northern foyers	a	none	Not affected by proposal
glass walls and supporting structures	b	medium – neutral	Alterations below the bronze transom to accommodate Lift 36 and relocated doors in JST Southern Foyer will have some impact physically, but should be largely unnoticed – acceptable impact.
surface treatment of exterior pedestal feet	int	none	Not affected by proposal

10.2.7 Podium exterior

The ‘Under the Steps’ project will involve removal of two areas of precast granite wall panels from the north wall of the Vehicle Concourse and exposure of the off-form concrete wall behind. The largest area comprises 15 panels and the smallest 7. In both cases, each area is flanked by a retained panel, separating it from adjacent door openings. This effectively frames and contains the areas of exposed concrete, retaining the visual strength of the cladding and the character of the Podium. These exposed areas will be covered by transparent glass digital wall panels that will replace the 7 existing digital screens in front of the precast panels. Due in part to the location of these removed panels, their removal is considered acceptable, and will provide an opportunity for visual activation and promotion in this important entry space. See also comments on Vehicle Concourse below.

The western entry to the proposed Creative Learning Centre will be minimally altered to provide a lobby space. This will involve the relocation of the existing bronze framed doors to the west, closer to the external wall. The entry will remain as a deeply shadowed recessed entry but shallower than the existing configuration. This should not visually alter the Podium exterior.

Similarly, the insertion of a pair of new bronze framed glass doors into the glazed northern front of the Podium to provide access to the Northern Broadwalk for the Creative Learning Centre will have minimal impact. The details will match the existing doors on this same level for the Function Centre.

Element	Significance	Potential impact of proposal	Comment
Podium exterior	A		
solid character of side walls with precast granite slabs of monumental size, including hoods to openings	a	medium – acceptable	Removal of sections of the precast wall cladding in Vehicle Concourse for the digital display walls will have minimal impact on the quality and character of the podium – acceptable. Minor alterations to entry to west side of Creative Learning Centre, but these will remain unnoticed – acceptable impact.
use of large scale precast granite slabs for paving and steps	a	none	Continuation of the precast paving to fully cover the floor of the Vehicle Concourse will strengthen its identification and integration with the podium and broadwalks – positive impact.
uninterrupted sweep of steps from bottom to top and from side to side	a	none	Not affected by proposal
open character bronze railing on podium edge and at the extremities of the steps	a	none	Not affected by proposal
access steps and balconies on the northern walls of the podium	a	none	Not affected by proposal
bronze vehicle doors to the central passage and Bennelong dock	b	none	Not affected by proposal
existing pedestrian entries off the western broadwalk	b	none	Not affected by proposal
design of picket additions to fence at the northern lip of the podium	int	none	Not affected by proposal
design of radial palisade fencing introduced where the northern ends of the podium decks meet the [external] steps	int	none	Not affected by proposal
large black sign pylon with strong silhouette and comic hammer head (security camera) on landing of monumental steps	int	none	Not affected by proposal

10.2.8 Original concept of sequential experiences on arrival, entry and circulation

Both the Vehicle Concourse and the Southern Foyers are very important spaces in Utzon's original arrival and entry sequence. He deliberately designed and articulated this sequence of spaces to provide a series of contrasting spatial and visual stimuli to heighten the experience of attending the theatre. Refer also to discussion in Section 11 of this assessment.

The Vehicle Concourse is the first covered entry space experienced by those who enter here, rather than via the wide open monumental steps above. It is also the major entry 'foyer' space in inclement weather and gives visitors and patrons their first experience of the extraordinary engineering contained within the building's structure. The proposed continuous expanse of precast granite paving panels and improved lighting will considerably enhance the unique qualities of this space, and its ability to lift the spirit of those who experience it. A core objective of Jørn Utzon's original intent.

It is important that the proposed digital art walls flanking the entry stairs support and not detract from this experience. Although it may be used occasionally for simulcasts or events, and the

proposed service access and rigging points will facilitate this, the Vehicle Concourse is an important entry experience on the journey towards the main performance venues and this must be respected in any programming for this space. It would be unfortunate if it became a regular or frequently used performance venue or function space.

The proposed works in the Southern Foyers will remove much of the present clutter in these spaces, particularly against the glass walls, providing a more spacious environment to mingle before and after a performance. Covered by the soaring shell ribs, these foyers are celebratory spaces and their majestic qualities should be enhanced by this reduced clutter and reorganisation of facilities.

These Southern Foyers contrast with the more contained and quieter spaces before and after them – the Box Office Foyer and the side foyers surrounding the auditoria. This contrast is reflected in the location of the proposed Lift 36 and the experience offered by it. From the enclosed foyer space below, the fully glazed lift rises through the surface of the Podium to the expansive Southern Foyer of the JST. This should allow patrons and visitors a greater appreciation of Utzon’s carefully designed sequence.

Element	Significance	Potential impact of proposal	Comment
Original concept of sequential experiences on arrival, entry and circulation	A		
Forecourt, podium steps, podium deck, box office foyer, stairways, level 30 foyers, auditoria	a	medium – positive	Sequence of spaces is not affected. Lift 36 will enhance accessibility to and appreciation of this sequence of experiences for the JST
Vehicle concourse, stairways to box office foyer, box office foyer, stairways, level 30 foyers, auditoria	a	high – positive	Sequence of spaces is not affected. Lighting and paving upgrade in the Vehicle Concourse, as well as reduced clutter and Lift 36 will enhance access to and appreciation of this sequence

10.2.9 Vehicle Concourse

This concourse is the location for the ‘Under the Steps’ project. There are no proposals in this application to enclose the ends of this space, or add wind protection screens.

The removal of the bitumen roadway and extension of the pink granite precast paving to the full area of the Vehicle Concourse is considered a very positive change and will considerably improve the ambience and quality of this space as a major entry point. It is important that all details of the paving are consistent with the Broadwalks and the colour of the granite is as close a match as possible, noting that the currently available material is less pink, tending towards a more brown / grey tone. Such colour variations could be acceptable, but samples should be tested and approved first.

The proposed arrangement of service access trenches with precast granite covers could potentially be a distraction in the otherwise regular paving configuration, particularly if the covers are damaged or not replaced properly, but this is considered a minor and acceptable impact.

The removal of the tilted granite panels on the southern side of the space is a high impact, however these will be replaced by a deeper configuration of tilted and raised panels that incorporate two large curved seating profiles plus a guard rail. Thus the function of the existing tilted panels, to conceal services and up-lighting to the folded beams, will be fulfilled by the new profile. With the added provision of simple and generous seating, the proposed changes are considered a positive impact and are supported.

The proposed modulated pair of broadly curved linear seats provides a subtle reminder of the fundamental division of the Opera House into major and minor halls. Further design development is needed to articulate the detailing of the brass seating to reflect Utzon’s concepts of honestly expressing its ‘making’ and assembly. Tests should be carried out in the space to determine the level

of polish on the brass, noting that Utzon tried to allow these 'natural' materials to weather and patinate naturally to a dull finish, polished only by constant handling. This would 'tone down' its apparent brightness to match the handrails and other bronze elements. Resolution is also required at east and west ends, where polished brass is shown returning on the end faces. These will catch the daylight and should not stand out. Further investigation is required to confirm if it is possible to use warm exhaust air from below (as proposed in DA documents) to warm this seating.

The proposed system of service carriage beams on the ceiling, between the folded concrete beams, should provide considerably improved lighting of both the concrete beams themselves and the space generally. With available technology the lighting levels will be able to be adjusted to suit daylight conditions and activities in the space. A very similar system has already proven to be successful in the Box Office Foyer. These beams will house sprinkler lines, uplights, downlights, speakers, security cameras, and rigging supports to assist staging of events. Above the service beams, bands of acoustic absorption material are proposed. This acoustic treatment will be largely concealed by the service beams, but will be fully exposed where the concrete beams are sloping to the south. This whole system should be tested first with prototypes to ensure the efficacy of the different components, and their impact on the nature and character of the space, including its acoustic qualities.

Some of the impacts of the removal of the precast wall panels and installation of 2 large digital art walls have been discussed in Sections 10.2.7 and 10.2.8 above. In terms of impact on the fabric of the place, the proposed digital walls are supported. The proposal to have these screen made of transparent glass will allow visitors to better understand the structural character of this space at the same time as introducing large digital art pieces, adding colour and focus. These screens also provide well placed infrastructure for patrons to enjoy simulcast projections in a covered space.

The proposed removal of the 7 individually framed digital advertising screens between the Western Foyer entry and Concert Hall stairs to accommodate the largest of these digital art walls could have additional impacts, potentially negative. The present screens provide appropriately placed, well designed opportunities for the Opera House to advertise its performances and visitor facilities. If these are removed and replaced with the digital art wall, this advertising will be substantially removed and there is very likely to be a desire to create other advertising opportunities to replace these. Location and management of advertising and promotional signage has been a major issue in the past, and the present digital signs have provided a well managed solution. Freestanding signage on the Forecourt and Broadwalk areas has proven to be intrusive and there is very limited remaining wall space within this concourse. Mobile or freestanding signage in this area, if used, will very likely clutter the space and be intrusive and should therefore be avoided.

The existing poster panels facing east adjacent to Central Passage and Stage Door are not visible from the main western approach, but with potentially greater pedestrian use of this area they could become more important for advertising. These design of these panels and their fixings have been assessed as intrusive and should be replaced with digital panels removed from the northern wall.

It is recommended the Opera House develop a policy on programming for the new digital art walls as well as a clear and comprehensive strategy for the location and management of promotional advertising and signage across the whole site that is consistent with the Utzon Design Principles and the CMP. Above all it should be sensitively placed, well designed and executed and not clutter, detract from or disfigure significant spaces or fabric.

Some guidance or policy should also be developed for the use of this space for occasional events, simulcasts etc. This should include issues of timing and frequency. As noted in 10.2.8 above, the Vehicle Concourse is an important entry experience on the journey towards the main performance venues and this must be respected in any programming for this space. It would be unfortunate if it became a regular performance venue or function space, or was frequently cluttered with advertising and 'temporary' installations.

Element	Significance	Potential impact of proposal	Comment
Vehicle concourse	A		
Open-ended spatial character dominated by the form of the unpainted concrete folded beams overhead	a	High – positive	Character and qualities improved by the proposed paving and especially the lighting

precast granite cladding and paving including tilted panels	a	High – positive	Tilted panels replaced by a different configuration incorporating seating. Precast granite paving to full extent of space. Two areas of precast wall cladding panels removed for digital art walls.
four bronze entrance doors to stairways including back-lit cut out signs	c	Neutral	Not affected by proposal. Recommended that sign over eastern stair (proposed escalator) include wording “Box Office Foyer”
poster displays on wall cladding	c	High	All existing digital panels to be removed on northern wall, and replaced with two larger digital display walls. Poster panels on east wall adjacent to Central Passage will remain. Refer to discussion above
1973 dedication applied to cladding	c	previously removed	Not affected, but consideration could be given to re-instating this dedication
bitumen roadway	d	High – positive	Removed entirely and replaced with precast granite paving
existing method of fixing posters	int	Potentially positive	Remaining poster panels on east return wall could be replaced with digital panels from north wall.
glazed shop added beside Reception Hall entry (1973) (now named as the Utzon Room entry)	int	already removed	Remaining evidence from this shop will be removed with repaving of the space, but subtle evidence will remain on the concrete beams. Positive impact.
any proposal that obscures the folded beams	int	High – positive	The proposed lighting and service beams will fit between the beams and highlight their presence and configuration.

10.2.10 Four stairways from vehicle concourse to Box Office

While these stairs provide the only access from the Vehicle Concourse to the Box Office Foyer, they remain unaffected by the projects in this proposal.

The proposed pair of escalators in the eastern most stair (to the Utzon Room) are included in a separate application. It is recommended that the signage over this escalator entry be modified to include the words “Box Office Foyer” as these will be the only escalators from the Vehicle Concourse up to this level.

10.2.11 Box Office foyer

Although situated between the Vehicle Concourse and Southern Foyers, the Box Office foyer is not affected by the proposed projects and retains its major role in Utzon’s arrival sequence. Changes proposed to the Box Office Foyer have been included in a separate application.

10.2.12 Foyers surrounding the major auditoria

The work proposed in the Southern Foyers is primarily associated with the bars and patron facilities. The proposed new lift in the JST Southern Foyer, Lift 36, has been included in a previous application.

The reasoning behind its location is discussed in Section 5.3 in this report. Its impact on the fabric of the Southern Foyer and the glass wall has been assessed as moderate and acceptable. This acceptability is contingent on its visual and physical separation from the adjacent 'dolphin canopy' over the stairs and escalators.

The original circular granite clad bars designed by Peter Hall were based on elements indicated in Utzon's early drawings. The CMP 3rd edition assesses them as having some significance (C) compared to the Southern Foyer itself, assessed as having exceptional significance (A). Their retention is therefore preferred to their removal, but if they were to be retained, they may unnecessarily restrict circulation. In the Concert Hall Southern Foyer, this would also prevent the installation of the proposed additional patron seating in this area. These are relatively tight spaces and are particularly popular before and after performances. The proposal to consolidate all bar activities to the north wall of each Southern Foyer provides benefit from an operational and servicing perspective. If the circular bar is removed from each foyer, the available space is opened up and the sense of clutter reduced. Therefore the proposal to remove these bars is considered a high impact, but acceptable.

The proposed consolidation of bar and merchandising within a single unit along the northern side in these foyers should result in tidier storage and improved facilities as well as patron amenity. It should also result in less clutter in these spaces. There will undoubtedly be requests for more display and merchandising facilities beyond that provided, but this should be resisted by SOH management to retain the clarity of the foyer space and maximise patron enjoyment of it.

Like the proposed brass seating in the Vehicle Concourse, the simple linear statement of the proposed bar units reflect the power and scale of Utzon's soaring concrete structure above. Each bar is a sculptural, almost monolithic element and although not fully consistent with Utzon's idea of assembling larger pieces from prefabricated smaller components, the overall form and configuration are considered to be appropriate for these spaces. To be more consistent with Utzon's design principles, this brass clad bar should ideally express its 'making' and assembly, and it is recommended this be explored further. The solution should be direct and honest and not detract from the simplicity of the design.

The use of dark burnished brass and glass for these bar units is consistent with Utzon's palette of materials for these hybrid 'outside' spaces. Highly polished brass should be avoided.

The southern face of each bar projects further into the foyer than the existing, but this results from increased storage and amenity behind them. They should not extend any further than shown on the DA drawings.

The repetitive panelled system of the brush box wall cladding in each foyer permits minor alterations and modification without major impact on the overall character of this element. The proposed modifications to these panelled walls is well considered and is supported. The proposed incorporation of additional digital panels for tours and promotion is also supported.

It should be noted that the surviving red and green signage for wayfinding in these foyers has been assessed in the draft 4th edition CMP as significant and these elements should be retained.

The proposed new Serpentine seating against the brush box panelling and the modifications required to accommodate it are supported. The form of the proposed seating is simple and elegant and is supported. Arm rests at regular intervals on the Serpentine Lounge may need to be considered, however this can be tested with the prototype being installed in the Renewal Lounge. The removal of existing seating against the glass side walls is acceptable as the new seating will still increase overall capacity. New seating proposed within the main space of the Concert Hall Southern Foyer will further increase capacity without unduly cluttering the space. If one took a purist approach, there would be little or no seating in these spaces, but this would deny a basic need of patrons and visitors, and also deny many the opportunity to sit and enjoy the majesty of the space.

The existing bronze and terrazzo based circular drink tables could be retained in use in these areas and could sit comfortably with the proposed fitout. Due to the limited space, bar stools should be avoided if at all possible.

Element	Significance	Potential impact of proposal	Comment
Foyers surrounding the major auditoria	A	medium	
Upper termination of folded beams forming canopies to stairs from Box Office to southern foyers	a	none	Not affected by proposed works New Lift 36 retains a respectful distance from this significant canopy
Cathedral character of space under soaring rib vaults	a	none	Not affected by proposed works
Unpainted off-form concrete vaults with fan shaped pedestals	a	none	Not affected by proposed works
precast granite paving	a	low	Paving will be extended over footprint of removed circular bars
unpainted off form concrete radial cranked beams in the northern foyers	a	none	Not affected by proposed works
stairs from Box Office foyer to southern foyers	a	none	Not affected by proposed works
glass wall system with steel mullions and bronze fittings and a non-reflecting zone	b	minor	Modifications required below bronze transom in west or east side wall to accommodate doors removed for Lift 36 – minor impact.
Olsen's and Jagamara's murals in the northern foyers	b	none	Not affected by proposed works
square section bronze rails at base of glass walls (1973)	b	none	Not affected by proposed works
bronze and black leather bench seats (1973)	c	high	Removed in Southern Foyers and replaced with new seating – acceptable impact
small circular bronze based tables (1973)	c	none	Not affected by proposed works – could be used with new seating
circular bar counter and lighting tree (1973)	c	high	Removed entirely. Bar function relocated to north wall. High impact but acceptable
bust of Eugene Goosens	c	none	Not affected by proposed works
black leather lounges in northern foyers	c	none	Not affected by proposed works
mobile bar	d	high	Replaced with new fixed bar in Southern Foyers. Northern Foyers not affected
colour-coded box signs (1973)	d	none	Significant signage and should be retained
brush box cladding to auditoria carcase (form and vertical extent)	d	moderate - neutral	Modifications to Southern foyers to accommodate storage, services and bar
foyer light fittings	d	none	Not affected by proposed works
program seller's booth	d	high	Hopefully made redundant by proposed works
circular drink tables with terrazzo base	d	none	Not affected by proposed works
relationship of major auditoria carcasses above brush box walls to interior of the roof shells	int	none	Not affected by proposed works

relationship of carpets to northern foyers	int	none	Not affected by proposed works
bronze rails in side foyers, after 1973	int	none	To be revised as part of site wide handrail review
ad hoc supplementary lighting	int	none	Upgraded infrastructure needed
advertising banners for sponsors	int	none	Not part of this project
debris and fixings remaining from past activities	int	none	To be cleaned up – at least for now
carpet-clad additions in northern foyers to provide storage	int	none	Not affected by proposed works
carpet cladding to columns	int	none	Not affected by proposed works

10.2.13 Original administration reception area, corridor and suites with wobbly treatment on level 12 north of the Drama Theatre

The impact of the proposed reconfiguration of the western part of this area is discussed above under 10.2.6. The proposed configuration of spaces and wall alignments respects the original geometry and structure of the Podium.

The existing configuration of this area will be considerably altered by this proposal, but it will transform a presently back-of-house set of spaces into a more public area with appropriate connections to the Western Foyer and Western and Northern Broadwalks. These spaces have been identified in the CMP as being ideally located for a more public use.

The proposal includes removal and salvage of the wobbly panels and then modifying and re-installing them in a new and dynamic configuration once the spaces have been altered. This is described in the drawings.

The northern most sections of the two main spaces will be fitted out completely with the wobbly panels in the same manner as Peter Hall had intended within the administration areas of the Podium while other parts will have pared back finishes to closely reflect the character of service and backstage areas. Wobbly panels on the walls will conceal storage and other facilities, providing order and flexibility in the manner intended by Hall.

A new lobby is proposed to connect the Western Foyers with the Creative Learning Centre. This involves reconfiguration of the existing walls enclosing the existing stair and Lift 9, and modification of existing storage units at the north end of the Western Foyer. The proposal retains the existing materials and finishes of these elements and will have little visible impact. The only visible clue to the presence of the Creative Learning Centre from within the Western Foyer, will be peep-hole of other device in the entry door, otherwise appearing as a storage cupboard. The exact details of this 'clue' will be refined in the design development stage and should be reviewed at that time. Within the new lobby, mirrored surfaces are proposed to provide a sense of imagination, of entering the world of theatre. While such finishes have not been used elsewhere in the Opera House, they are considered appropriate in this foyer. Their discrete presence, only revealed on opening the 'cupboard' door is also considered appropriate.

Strong colours are proposed in this learning centre, within the wobbly fronted storage units, and on other selected surfaces. This is considered appropriate in a creative learning environment and is supported. Colour was an important part of Peter Hall's interior schemes for the Opera House and it is suggested that the selected colours could potentially have some connection with the history and / or aesthetics of the building. However this does not mean that colours should be restricted to only those already used at the site.

The alterations proposed to form this new learning centre will retain and respect Hall's regime within these modified spaces and are supported.

The proposed use of stretched reflective membrane ceiling is supported in the entry lobby, but should not be extended into other areas. Details and samples of the 50mm thick perforated metal acoustic panels proposed for ceilings in other areas should be provided at the design development and documentation stages.

It is strongly recommended that doors, door finishes and hardware within the creative learning spaces should retain and respect the Hall regime, rather than the Utzon regime within the Western Foyer.

Element	Significance	Potential impact of proposal	Comment
Original administration reception area, corridor and suites with wobbly treatment on level 12 north of the Drama Theatre	C	high	Western end of this area completely reconfigured for proposed new use – refer to discussion
wobbly treatment	b	High – positive	Original Peter Hall wobbly fittings salvaged and reconfigured to suit new configuration and use – positive impact
inserted partitions	int	High – positive	These will be entirely removed in affected areas.

10.2.14 Amalgamated foyers for Playhouse, Studio and Drama Theatre at Broadwalk level (Western Foyers)

In terms of impacts on the character and use of the Western Foyers, the Creative Learning Centre should have a positive impact. At present the northern end of this foyer has a sense of being enclosed and not leading to any other space or facility. With the proposed discrete but primary entry to the learning centre off this space, this 'blind' end will be activated and the presently diverse range of theatre experiences accessed from this foyer will be further enriched.

The proposed works for the Creative Learning Centre will have a minimal impact on the joinery at the northern end of this space and the existing finishes will be retained.

The exact nature and configuration of the 'peep-hole' or clue in the learning centre entry door will be determined during the design development and documentation stage and should be assessed then.

10.2.15 Central vehicle passage space, level 12

The works to the Vehicle Concourse should have no impact on the Central Passage or the Stage Door, although both of these entries may assume a new prominence with the improved lighting and paving in this area.

10.3 Compliance with CMP policies

It is clear from the Statement of Significance in the CMP that the Sydney Opera House derives its significance primarily from its form (design structure and construction), function and setting. These three components are interdependent and as each of them is crucial to this significance then each must be maintained to the highest level. These are discussed below within the framework of relevant policies from the CMP 3rd edition.

Policy 1.1 Utzon, Hall and the approach to change – Utzon’s principles

All work on the Sydney Opera House should be carried out within the framework of Jørn Utzon’s design principles as endorsed in 2002.

Comment

The proposed works have been designed and will be documented and carried out within the framework of Utzon’s Design Principles. In particular, the proposed works to the Vehicle Concourse and the Southern Foyers will strengthen the Utzon character of these spaces.

Policy 1.2 Utzon, Hall and the approach to change – Utzon’s concepts

The following fabric and attributes are essential to Utzon’s concept for the Sydney Opera House and should be retained in any future development:

- a. the relationship between the three shell groups and the platform below;*
- b. the shell geometry and the ceramic tile cladding;*
- c. the canted alignments of the major shell groups;*
- d. the supporting structural systems throughout the building;*
- e. the visually free standing sculptural form of the building unobstructed by adjacent erections;*
- f. the open and uncluttered character of the forecourt and grand stair by which the raised podium is gained;*
- g. the visual relationship with the harbour setting from the podium – including the foyers surrounding the auditoria;*
- h. the retention of a ‘natural’ palette of materials for external fabric.*

Comment

The only one of these concepts affected by these projects is ‘*d. the supporting structural systems throughout the building*’. This has been discussed above in 10.2.6.

In summary, the dramatic folded concrete beams spanning the Vehicle Concourse will not be physically impacted by these projects (apart from fixings to support the service beams). They will however be considerably enhanced visually with improved lighting.

The alterations within the Podium structure to create enlarged spaces for the Creative Learning Centre will have moderate impact on the supporting structural systems in this area, however these impacts are considered acceptable in order to achieve the enhanced amenity for the proposed function.

Policy 1.3 Utzon, Hall and the approach to change – treatment of hybrid ‘outside’ spaces

Hybrid spaces, such as the foyers surrounding the major auditoria and the reception hall, reflecting the work of both Utzon and Hall, may be retained, or reworked in accordance with Utzon’s concepts and principles, provided the qualifications set out in Policy 56.1 are accepted.

Comment

The Southern Foyers are considered hybrid ‘outside’ spaces, reflecting the work of both Utzon and Hall. The proposed changes to these spaces are in accordance with Utzon’s concepts and principles and potentially strengthen the Utzon character of these spaces.

Policy 1.4 Utzon, Hall and the approach to change – Hall's interiors

In any adaptation for modest functional improvement, interiors designed by Hall should retain or recover the character of his original design regimes with their co-ordinated detailing.

Comment

The Creative Learning Centre is within the Podium in administration areas fitted out by Peter Hall. The proposed works are more than modest functional improvements and constitute a major change, however this proposal retains and respects the character and design regimes used by Hall. In this instance and for this proposed facility, this is considered a positive impact.

Policy 1.5 Utzon, Hall and the approach to change – Major works

Major works within the auditoria and podium are acceptable where technical advance, expert advice, design quality, adequate resources and meticulous construction can be combined to create performance and service facilities that will improve function and reinforce or enhance the significance of the Sydney Opera House, provided that:

- *the work is planned in the context of an overall plan for the place;*
- *the scheme is developed in accordance with Policy 56.1 on the management of change.*

Comment

The extent of changes proposed to accommodate the Creative Learning Centre would suggest this should be regarded as 'major works' and therefore this policy applies. The proposal has been developed within the context of an overall plan to accommodate specific functions, and match these with appropriate spaces. It is therefore consistent with this policy.

The projects have been developed and will be hopefully executed in accordance with advice as described in policy 56.1.

Policy 2.2 Views and vistas

The Sydney Opera House Trust should ensure that no erection in the area under its control interferes with any view or vista to or from the Opera House.

Policy 3.1 Open and uncluttered setting

The erection of long stay structures as venues for hire (or for any other purpose) is unacceptable on the forecourt, broadwalk and podium stairs and platform.

Comment

Some views towards the Opera House may be marginally affected by the introduction of the digital art walls in the Vehicle Concourse, however this will be dependant on visibility and programming of content, not on the physical works. Any resultant impacts will be variable and are considered manageable.

Proposed works in the Southern Foyers and Creative Learning Centre will have no adverse impacts on views and vistas to or from the Opera House.

The proposed projects will not require any short or long term structures to be erected on external areas.

Policy 6.1 External form

The Opera House should retain unchanged its external form of roof shells, glass wall concept, podium and podium steps, forecourt and broadwalk.

Policy 9.1 Openings in podium walls

No treatment of the podium should diminish the impressive effect of its solid side walls with their minimal horizontal fenestration nor disrupt the contrast with the ceramic clad shells and glass walls above.

Policy 9.2 Openings in podium walls

New Broadwalk level openings are acceptable provided they can be carried out in accord with Policy 9.1 above and will achieve functions and effects that materially add to the significance of the place.

Comment

The proposed alterations to the side glass wall of the JST Southern Foyer to accommodate a relocated entry door, are relatively minor and occur below the dominant bronze transom. Once executed they will be largely unnoticed as they respect the character and materials of the existing glass walls.

Proposed alterations to the western entry to the Creative Learning Centre from the Broadwalk are minimal and respect the deep shadowing of this entry and retain the form, details and material language of the Podium. This should not be noticeable as a change. The new glazed doors in the northern wall of the Podium will utilize the same form, detail and materials as the existing doors on this elevation and should also not be noticeable as changes.

These proposed changes will therefore comply with these policies.

Policy 13.1 Paving and cladding of podium and broadwalk

The existing paving and cladding system of precast and etched pink reconstituted granite slabs of monumental size should be retained.

Comment

The proposed extension of the precast pink granite slabs into the Vehicle Concourse complies with this policy.

The proposed removal of precast granite wall panels for the new digital art walls accords with this policy in that it does not replace the existing cladding system, however these removed panels will expose the concrete structural walls behind. As this is only proposed over limited and contained areas, it is considered acceptable.

Policy 17.1 Designed sequence of interior public spaces

Both original arrival sequences with their different and changing experiences should be retained:

- forecourt, grand staircase, podium, box office foyer, and auditoria foyers;
- vehicle concourse, stairways, box office foyers and auditoria foyers.

This policy includes the retention of original spaces, the presentation of unobstructed and revealingly lit structural systems and the consistent use of a range of 'natural' materials, textures and colours.

Comment

The proposed works in the Vehicle Concourse and Southern Foyers comply with this policy. The works will strengthen the inherent qualities and character of each space and thus enhance the patron experience of approach and arrival – as Utzon had intended.

Policy 22.3 Interior lighting – redesigned spaces

In any major redesign of spaces in which architectural character is important, the emphasis should be

on concealed or unobtrusive light sources that reveal or reinforce that character, in addition to illumination for the safe and effective function of the space.

Policy 22.5 Interior lighting – safety

Any safety issues should be addressed without disrupting the requirements in the policies above.

Comment

Lighting will be an essential part of these proposed projects, particularly in the Vehicle Concourse. The DA documentation indicates appropriately designed indirect and ambient lighting similar to that recently installed in the Box Office Foyer. This lighting will enhance the character and quality of the space as well as improve patron safety and comfort. Further details will be developed in accordance with these policies during the design development and documentation stages of the project. Prototypes should also be tested.

Policy 23.2 Character and treatment of internal spaces – “Wobbly Land” – performers’ and staff areas – adapted spaces

Work necessary to adapt existing wobbly spaces to new or upgraded functions should be designed:

- *to continue the original characteristics and quality of the space or to complement those characteristics;*
- *to have minimum impact on the original fabric.*

Policy 23.5 Character and treatment of internal spaces – Timber finishes used by Hall

All removed white birch veneered elements should be safely stored and catalogued for future reuse.

Comment

The proposed Creative Learning Centre will retain Peter Hall’s moulded plywood wobbly ceiling and wall systems in the spaces immediately adjacent to the Northern Broadwalk. Elsewhere in these spaces, a modified set of wobbles will be used as operable storage unit fronts.

All remaining original plywood elements should be safely stored in accordance with Policy 23.5.

Policy 24.1 Character and treatment of internal spaces – Service areas

In accordance with policy 1.4 (Hall’s interiors) the general character of the service areas should be retained in any future adaptations.

Policy 24.2 Character and treatment of internal spaces – Service areas

Care should be taken during alteration and upgrading of services to remove those with no likely future use and to maintain a tradition of neat and precise installation of colour coded services.

Comment

Hall’s design regime for service and backstage areas will form the basis for the proposed fittings and finishes in the main teaching spaces of the Creative Learning Centre

Policy 26.1 Character and treatment of internal spaces – Internal adaptation and alteration

In keeping with policy 1.4, changes and extensions of use, technical improvements and upgrading of access and facilities should be permitted where they can be carried out without loss of quality and character in the spaces involved.

Comment

DA documentation suggests the quality and character of spaces affected by these proposed projects will be retained, however it is important that refinement and consistency of details be continued during the design development and documentation phases.

Policy 28.1 Foyers surrounding the major auditoria

Whatever action is taken, the foyers should be treated as 'outside' spaces and 'natural' materials, textures and colours used.

Policy 28.2 Foyers surrounding the major auditoria – unimpaired and uncluttered

Surrounding views from the foyers should remain unimpaired by intrusions or reflections and the foyers should be maintained in an uncluttered state.

Comment

Proposed works to the Southern Foyers will retain and continue to use Utzon's 'natural' palette of materials. The new bars will utilise 'naval' brass with a dark patination – maintaining consistency with the weathered bronze used elsewhere in these spaces.

Policy 38.1 Care of the fabric – Removal or alteration of fabric

Any proposal to remove or alter original and/or significant fabric should:

- have regard to the level of significance of the fabric and to the impact on the character and quality of the place affected;*
- be checked to ensure there is no feasible alternative;*
- only be considered in the context of an overall plan.*

The last point in policy 38.1 above will help to prevent a series of ad hoc minor removals or alterations resulting in the progressive degradation and, ultimately, destruction of significant elements of the place.

Policy 38.2 Care of the fabric – Removal or alteration of fabric

Where significant fabric is removed and capable of subsequent re-use on site, its location should be recorded and the items catalogued and stored safely against possible future replacement or relocation in a space of appropriate character.

Comment

The proposed works involve removal or alteration of significant fabric. This includes:

- removal of a limited number of precast pink granite wall cladding panels in the Vehicle Concourse;
- removal of the pink granite clad circular bars in the Southern Foyers;
- alteration of the southern and eastern glass walls to the JST Southern Foyer;
- alteration of the brush box wall panelling in the Southern Foyers.

The decision to remove or alter significant fabric has been based on their significance, functional requirements, consideration of alternatives, potential impacts on the space concerned, and weighted against the overall benefit to other aspects of significance including significant use.

Removed precast wall cladding elements will be recorded, salvaged and stored for re-use elsewhere in accordance with these policies.

Policy 39.1 Treatment of intrusive items

Items identified as intrusive in this conservation plan should be removed.

Comment

A number of intrusive items will be removed by these proposed works. These are listed under the individual elements in Section 10.2 of this report.

It is important that great care and consideration be given to the design, selection and placement of any object, furniture or fixing in the spaces affected by these projects to ensure none of these become intrusive items in the future.

Policy 41.1 Treatment of unpainted precast and off-form concrete

Interior and exterior surfaces of unpainted concrete ribs, pedestals and beams should remain unpainted and their details unobscured.

Comment

It is proposed that unpainted concrete, both precast and off-form in-situ, remain unpainted and exposed.

Policy 49.1 Managing the process of change – Use, approach and review

The Sydney Opera House should continue its primary use as a performing arts centre and its importance as a tourist attraction should be recognised. The building and its setting should not be altered to accommodate uses that will vitiate its significance and character. The approach should be sufficiently flexible to permit the delivery of a high level of performance and provision of services.

Policy 49.2 Managing the process of change – Use, approach and review

The policies set out in this document should be applied irrespective of the use to which the building, or its parts, are put.

Policy 49.3 Managing the process of change – Use, approach and review

Proposed changes of use to any part of the building should only be considered in the context of a co-ordinated plan for the whole building and priorities established to determine which functions must be kept on site and which may be located elsewhere.

Comment

The proposed works in the Vehicle Concourse, Southern Foyers and Creative Learning Centre are designed to enhance the significant primary use and experience of this place as a performing arts centre.

All changes have been considered in the context of a coordinated plan for the whole building and have their basis in the 2001 Strategic building Plan put together by Jørn Utzon with Utzon Architects and JPW Architects.

Policy 50.1 Managing the process of change – compatibility

Uses are unacceptable if they require alterations, additions and facilities that:

- *vitate the original concept of the designers of those elements of the place that are assessed as being of exceptional significance;*
- *degrade the character and quality of fabric, spaces and relationships;*
- *are likely to cause excessive wear and tear, or disfigurement, to significant fabric.*

Comment

The changes proposed in these projects are consistent with Utzon's original concept for the building and its parts and should not lead to a degradation of the character and quality of fabric, spaces and relationships.

The details of each project require further refinement and if necessary, prototyping, in the next stages of design development. It is essential that the Sydney Opera House's heritage architect, Eminent Architects Panel and Conservation Council be involved in this process.

Policy 51.1 Managing the process of change – Relating levels of significance to proposals

The more significant a concept, fabric, relationship, space of vista, the more should care be exercised in preparing proposals that may affect the place – the objective being to ensure that the work not reduce, and may reinforce, the identified significance.

Comment

The projects proposed in this DA should reinforce the identified significance of each space but will involve the removal or alteration of significant fabric to achieve this. In determining the nature and configuration of each part of the projects, considerable regard was made for the significance of the fabric affected, the potential impacts on the space concerned, and the role of the particular project in supporting the broader significance of the place.

Policy 52.1 Managing the process of change – Use of the Burra Charter

The future conservation and development of the place should be carried out in accordance with the principles of the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance (Burra Charter) as revised in 1999.

Comment

All decisions thus far relating to the projects in this application have been in accordance with Burra Charter principles and processes. This should continue to the completion of the project.

Policy 56.1 Managing the process of change – Sequence and advice in developing proposals

Continuity of relevant and experienced heritage conservation advice should be provided as part of the process by which changes to the Sydney Opera House and its setting are developed and executed. The timing of this advice is important. For major projects it should be drawn upon:

- *initially, at the concept stage;*
- *during the development and refinement, or alteration, of the proposal;*
- *for a formal statement of heritage impact, or its equivalent, in response to the completed development application;*
- *to keep a watchful eye on work actually underway.*

Comment

Heritage conservation advice has been sought throughout the design stages for these projects and this HIS assesses the completed development application. It is important that this specialist advice continue through to completion of the project to ensure the broader as well as detailed conservation objectives are achieved.

Policy 59.1 Managing the process of change – External processes

Changes that may have a 'significant effect' on the heritage significance of the Sydney Opera House and its site should be referred to the relevant consent authority.

Comment

The proposed Under the Steps, Southern Foyer, and Creative Learning Centre projects involve some major changes that will impact on significant fabric and spaces. These impacts

have been assessed in this Heritage Impact Statement and this will accompany an application for approval from the relevant consent authorities.

10.4 Conclusion re CMP compliance

The proposed works to the Opera House in this development application will affect a number of significant parts and aspects of the Sydney Opera House. These impacts are discussed in detail above and summarised here.

Under the Steps (Vehicle Concourse)

The Vehicle Concourse is the first covered entry space experienced by those who enter via this approach, rather than via the wide open monumental steps above. It is also the major entry 'foyer' space in inclement weather and gives visitors and patrons their first experience of the extraordinary engineering contained within the building's structure. The proposed continuous expanse of precast granite paving panels and improved lighting with the introduction of service and lighting beams between the folded beams will considerably enhance the unique qualities of this space, and its ability to lift the spirit of those who experience it. A core objective of Jørn Utzon's original intent.

The removal of two areas of precast granite wall panels (total of 22 panels) from the north wall of the Vehicle Concourse and exposure of the off-form concrete wall behind and installation of large transparent digital art wall panels will impact on significant fabric but will also provide an opportunity for visual activation and promotion in this important entry space. Careful programming of content on these digital art walls will be necessary if potentially negative impacts or unwanted distractions are to be avoided. Their location deep inside the concourse space means the digital content is unlikely to be too noticeable from longer views towards the Opera House. Tests should confirm if they are likely to be a problem, and if so, the technology exists to reduce their visibility from oblique angles.

Although this space may be used occasionally for simulcasts or events, and the proposed service access and rigging points will facilitate this, the Vehicle Concourse is an important entry experience on the journey towards the main performance venues and this must be respected in any programming for this space. It would be unfortunate if it became a regular or frequently used performance venue or function space.

The construction of deeper tilted and raised panels along the southern edge of this space that incorporate two large curved seating profiles plus a guard rail are considered positive changes and are supported. Their modulation in proportion to the fundamental division of the Opera House into major and minor halls is an elegant device that assists in understanding the nature and character of this building. Further design development and prototyping is needed to refine the detailing of the brass seating to reflect Utzon's concepts of honestly expressing its 'making' and assembly and to minimise the potentially distracting 'brassiness' of these elements. Further investigation is required to confirm if it is possible to use warm exhaust air from below (as proposed in DA documents) to warm this seating.

The proposed system of service carriage beams on the ceiling, between the folded concrete beams should be tested first with prototypes to ensure the efficacy of the different components, and their impact on the nature and character of the space, including its acoustic qualities.

It is recommended the Opera House develop a policy on programming for the new digital art walls as well as a clear and comprehensive strategy for the location and management of promotional advertising and signage across the whole site that is consistent with the Utzon Design Principles and the CMP. Above all it should be sensitively placed, well designed and executed and not clutter, detract from or disfigure significant spaces or fabric.

It is also recommended that a policy be developed for the use of the Vehicle Concourse for occasional events, simulcasts etc. This should include issues of timing and frequency so that its primary use as an exceptionally significant arrivals foyer space is not compromised.

Southern Foyers

The work proposed in the Southern Foyers is primarily associated with bar and patron facilities. The proposed new lift in the JST Southern Foyer, Lift 36, has been included in a previous application. The consequent relocation of one pair of perimeter exit doors to the west or east glass wall in this foyer is considered consistent with the CMP and is supported. The proposed alterations copy existing details and are below the prominent bronze clad transom. They will not be intrusive or distracting. The resultant improvement to access between levels is considered a positive impact.

The proposed removal of the original Peter Hall designed circular bars is considered a high but acceptable impact as their retention would unduly cramp the functionality of these foyers. The proposed consolidation of bar and merchandising within a single unit along the northern side in these foyers should result in tidier storage and improved facilities as well as patron amenity. It should also result in less clutter in these spaces. There will undoubtedly be requests for more display and merchandising facilities beyond that provided, but this should be resisted by SOH management to retain the clarity of the foyer space and maximise patron enjoyment of it.

Each bar is a sculptural, almost monolithic element and although not fully consistent with Utzon's idea of assembling larger pieces from prefabricated smaller components, the overall form and configuration are considered to be appropriate for these spaces. To be more consistent with Utzon's design principles, this brass clad bar should ideally express its 'making' and assembly, and it is recommended this be explored further. The solution should be direct and honest and not detract from the simplicity of the design.

The use of dark burnished brass and glass for these bar units is consistent with Utzon's palette of materials for these hybrid 'outside' spaces. Highly polished brass should be avoided.

The southern face of each bar projects further into the foyer than the existing, but this results from increased storage and amenity behind them. They should not extend any further than shown on the DA drawings.

The proposed modifications to the brush box panelled walls is well considered and is supported. The proposed incorporation of additional digital panels for tours and promotion is also supported. The surviving red and green signage for wayfinding mounted on the panelled walls in these foyers has been assessed in the draft 4th edition CMP as significant and these elements should be retained.

The proposed new Serpentine seating against the brush box panelling in the side foyer spaces is supported. The removal of existing seating against the glass side walls is acceptable as the new seating will still increase overall capacity. New seating proposed within the main space of the Concert Hall Southern Foyer will further increase capacity without unduly cluttering the space.

The existing bronze and terrazzo based circular drink tables could be retained in use in these areas and could sit comfortably with the proposed fitout. Due to the limited space, bar stools should be avoided if at all possible.

Creative Learning Centre

The existing configuration of this area will be considerably altered by this proposal, but it will transform an area of separate administration spaces into a more public area with appropriate connections to the Western Foyer and Western and Northern Broadwalks. These spaces have been identified in the CMP as being ideally located for a more public use and the proposed Creative Learning Centre is consistent with this objective.

The works will involve removal of sections of original internal podium walls, including a section of a major curved loadbearing wall. Detail resolution of this opening should be refined in the documentation stage to minimise any potentially negative impacts and retain the integrity of this important concrete element. This will have a moderate but acceptable impact on significant structure within the Podium.

The proposal includes removal and salvage of Peter Hall's wobbly panels from affected spaces and then modifying and re-installing them in a new and dynamic configuration once these spaces have been altered. These alterations will retain and respect Hall's regime and are supported.

The northern most sections of the two main spaces will be fitted out completely with the wobbly panels in the same manner as Peter Hall had intended within the administration areas of the Podium while other parts will have pared back finishes to closely reflect the character of service and backstage areas. Wobbly panels on the walls will conceal storage and other facilities, providing order and flexibility in the manner intended by Hall.

A new lobby is proposed to connect the Western Foyers with the Creative Learning Centre requiring reconfiguration of the existing walls enclosing the stair and Lift 9, and modification of existing storage units at the north end of the Western Foyer. The proposal retains the existing materials and finishes of these elements and will have little visible impact in the Western Foyer. The only visible clue to the presence of the Creative Learning Centre from within the Western Foyer, will be a peep-hole or other device in the entry door, otherwise appearing as a storage cupboard. The exact details of this 'clue' will be refined in the design development stage and should be reviewed at that time. Within the new lobby, mirrored surfaces are proposed to provide a sense of imagination, of entering the world of theatre. While such finishes have not been used elsewhere in the Opera House, they are considered appropriate in this foyer.

The proposed use of stretched reflective membrane ceiling is supported in the entry lobby, but should not be extended into other areas. Details and samples of the 50mm thick perforated metal acoustic panels proposed for ceilings in other areas should be provided at the design development and documentation stages.

Areas and elements of strong colours are proposed in this learning centre, particularly as finishes within and behind the wobbly fronted storage units. This is considered appropriate in a creative learning environment and is consistent with Peter Hall's aesthetic and design regime.

It is strongly recommended that doors, door finishes and hardware within the creative learning spaces should retain and respect the Hall regime, rather than the Utzon regime within the Western Foyer.

In summary, the projects proposed in this application are assessed as being generally consistent with the CMP. Further testing of prototypes and refinement of details is required during design development and documentation. All works should continue to be reviewed by the Opera House's heritage architect, the Eminent Architects Panel and Conservation Council.

11.0 DISCUSSION OF COMPLIANCE WITH THE UTZON DESIGN PRINCIPLES

The *Utzon Design Principles* (UDP) provide important guidance on the intended role of particular spaces and elements and on how they should be treated in the future. Relevant quotes are provided below.

Concourse was intended as a foyer

The idea of the drop-off was that it was a foyer “you could increase the overall lighting.” (UDP page 51)

Being in another world

“Concourse area should have a welcoming ambience with more light and reduced glare.” (UDP page 59)

Sculptural effect accentuated by light

“Here, the soffit of the podium will form the first impression of the building from this approach, this surface emphasised by lighting, shows the marked sculptural effect of the concrete folded beams.” (UDP page 84)

Future treatment of finishes

Refers to folded concrete beams of concourse:

“Some form of treatment of these surfaces as a whole or in parts will be necessary to conceal the defects and bring it up to a uniform and acceptable standard.” (UDP page 51)

Comment

These quotes stress the importance Utzon placed on lighting in the Vehicle Concourse and its role in emphasising the sculptural effects of the folded concrete beams. The proposed works in the Vehicle Concourse, particularly regarding lighting, are consistent with his design intent.

The fourth quote also notes the necessity to repair and treat the surface of the beams to conceal defects. While many of these defects are now accepted as legitimate evidence of the construction process, some work will need to be carried out prior to the installation of new lighting to remove water and smoke staining and repair damage from removed fixings. This should include cleaning in accordance with Opera House practice for cleaning exposed internal concrete elements.

Objective is to bring joy

“The architects’ gift to society is to bring the people a big joy from the surroundings that architects create.” (UDP page 59)

Spans expressed by ribs and folds

“This resulted in a building where all spans are clearly expressed by ribs and folds.” (UDP page 78)

Colour reinforcing human spatial experience, movement

“The idea was to see a spectacular building as you arrive and as you enter the foyers you see additional colours. You also get a more intimate feeling.” (UDP page 80)

Comment

These quotations refer to the foyer spaces generally, but clearly express Utzon’s intent. The proposed works in both the Vehicle Concourse and Southern Foyers are consistent with his intent.

The proposed digital art walls in the Vehicle Concourse will add colour in a manner that is consistent with Utzon’s design intent.

Beautiful experience oriented in the harbour

"...People have a beautiful experience entering and walking up the stairs and entering the auditoria, while they are all the time oriented in the beautiful harbour and have the views of the spectacular Sydney Harbour setting." (UDP page 59)

Being in another world

"The patrons will receive on their way to the theatre halls an impression of restful and dignified surroundings with a generous spacious layout." (UDP page 59)

Feeling detached from the city

"During intermission you remain around the auditorium and can retain the feeling of being in another world."

"After the performance the bars and lounges will present for the patrons a second opportunity to enjoy these views and will underline their feeling of being detached from the city in a world of its own."

"As we move through the glass doors and arrive at the foyer, we are introduced to the back wall of the stage, reminding us of the purpose of our visit." (UDP page 60)

Succession of visual and audio stimuli

"So going to the Opera House is a succession of visual and audio stimuli, which increase in intensity as you approach the building, as you enter and finally sit down in the halls, culminating with the performance." (UDP page 68)

Comment

These quotations refer to the foyers surrounding the main auditoria, including the Southern Foyers. The proposed works in these foyers are consistent with these design principles.

Concrete and ply

"The walls will show the concrete as it was constructed, contrasting with the moulded plywood panels which form the components of the furniture and fixings." (UDP page 71)

Comment

The retention and adaptation of the 'wobbly' plywood ceiling and wall panels in the Creative Learning Centre respects Hall's work in trying to adhere to Utzon's original principles in back-of-house areas. It is intended that all exposed concrete columns supporting the roof shells will be stripped back where not stripped already, to interpret the original structure in accordance with Utzon's intent.

12.0 COMPLIANCE WITH SYDNEY LOCAL ENVIRONMENT PLAN 2012 (SYDNEY LEP 2012)

The Sydney Opera House is listed as a Heritage Item on Schedule 5 of the Sydney LEP 2012 (Item 11712). The listing includes "forecourt, seawall, platform and interiors."

Before granting consent, an assessment of the impact of any proposed development is required via a 'heritage management document'. A conservation management plan is also required. (Clauses 5.10 (5) and (6) of the LEP 2012)

Section 10 of this Heritage Impact Statement assesses the proposed projects in this application against the CMP 3rd edition. This assessment accords with the heritage conservation requirements in the LEP 2012.

13.0 CONCLUSION

The impacts of the proposed works in the Vehicle Concourse, Southern Foyers and Creative Learning Centre projects on the significant values of the Opera House are described in detail above in this report. Large sections of the conclusion in Section 10 are repeated below.

It is our assessment that the proposed works in this application will have negligible impact on the Outstanding Universal Values that enshrine Sydney Opera House on the World Heritage List and will respect the work of both Jørn Utzon and Peter Hall.

The proposed projects will not have any significant impact on the national and state heritage values identified in their listings for Sydney Opera House.

The projects proposed in this application will improve the ability of the Opera House to cater for tourists as well as patrons, and engage them in a diverse range of performing arts activities at the house, including for children, thereby strengthening its role in Australia's cultural vitality and as a world renowned performing arts centre.

Proposed alterations externally will be consistent with existing details and materials, have only minor impacts and when completed will be largely unnoticed.

The proposed works to the Opera House in this development application will affect a number of significant parts of the Sydney Opera House. The impacts from each of these projects are discussed in detail above and summarised here.

Under the Steps (Vehicle Concourse)

The proposed continuous expanse of precast granite paving panels throughout this concourse and improved lighting with the introduction of service and lighting beams between the folded beams, will considerably enhance the unique qualities of this space, and its ability to lift the spirit of those who experience it. A core objective of Jørn Utzon's original intent.

The removal of two areas of precast granite wall panels (total of 22 panels) from the north wall of the Vehicle Concourse and exposure of the off-form concrete wall behind and installation of large transparent digital art wall panels will impact on significant fabric but will also provide an opportunity for visual activation and promotion in this important entry space. Careful programming of content on these digital art walls will be necessary if potentially negative impacts or unwanted distractions are to be avoided. Their location deep inside the concourse space means the digital content is unlikely to be too noticeable from longer views towards the Opera House. Tests should confirm if they are likely to be a problem, and if so, the technology exists to reduce their visibility from oblique angles.

Although this space may be used occasionally for simulcasts or events, facilitated by proposed service access and rigging points, the Vehicle Concourse is an important entry experience on the journey towards the main performance venues and this must be respected in any programming for this space. It would be unfortunate if it became a regular or frequently used performance venue or function space.

The construction of tilted and raised panels along the southern edge of this space that incorporate two large curved seating profiles plus a guard rail are considered positive changes and are supported. Their modulation in proportion to the fundamental division of the Opera House into major and minor halls is an elegant device that assists in understanding the nature and character of this building. Further design development and prototyping is needed to refine the detailing of the brass seating to reflect Utzon's concepts of honestly expressing its 'making' and assembly and to minimise the potentially distracting

'brassiness' of these elements. Further investigation is required to confirm if it is possible to use warm exhaust air from below (as proposed in DA documents) to warm this seating.

The proposed system of service carriage beams on the ceiling, should be tested first with prototypes to ensure the efficacy of the different components, and their impact on the nature and character of the space, including its acoustic qualities.

It is recommended the Opera House develop a policy on programming for the new digital art walls as well as a clear and comprehensive strategy for the location and management of promotional advertising and signage across the whole site that is consistent with the Utzon Design Principles and the CMP. Above all it should be sensitively placed, well designed and executed and not clutter, detract from or disfigure significant spaces or fabric.

It is also recommended that a policy be developed for the use of the Vehicle Concourse for occasional events, simulcasts etc. This should include issues of timing and frequency so that its primary use as an exceptionally significant arrivals foyer space is not compromised.

Southern Foyers

The work proposed in the Southern Foyers is primarily associated with bar and patron facilities. The proposed new lift in the JST Southern Foyer, Lift 36, has been included in a previous application. The consequent relocation of one pair of perimeter exit doors to the west or east glass wall in this foyer is considered consistent with the CMP and is supported. The proposed alterations copy existing details and are below the prominent bronze clad transom. They will not be intrusive or distracting. The resultant improvement to access between levels is considered a positive impact.

The proposed removal of the original Peter Hall designed circular bars is considered a high but acceptable impact as their retention would unduly cramp the functionality of these foyers. The proposed consolidation of bar and merchandising within a single unit along the northern side in these foyers should result in tidier storage and improved facilities as well as patron amenity. It should also result in less clutter in these spaces. There will undoubtedly be requests for more display and merchandising facilities beyond that provided, but this should be resisted by SOH management to retain the clarity of the foyer space and maximise patron enjoyment of it.

Each bar is a sculptural, almost monolithic element and although not fully consistent with Utzon's idea of assembling larger pieces from prefabricated smaller components, the overall form and configuration are considered to be appropriate for these spaces. To be more consistent with Utzon's design principles, this brass clad bar should ideally express its 'making' and assembly, and it is recommended this be explored further. The solution should be direct and honest and not detract from the simplicity of the design.

The use of dark burnished brass and glass for these bar units is consistent with Utzon's palette of materials for these hybrid 'outside' spaces. Highly polished brass should be avoided.

The southern face of each bar projects further into the foyer than the existing, but this results from increased storage and amenity behind them. They should not extend any further than shown on the DA drawings.

The proposed modifications to the brush box panelled walls is well considered and is supported. The proposed incorporation of additional digital panels for tours and promotion is also supported. The surviving red and green signage for wayfinding mounted on the panelled walls in these foyers has been further researched and assessed as significant and these elements should be retained.

The proposed new Serpentine seating against the brush box panelling in the side foyer spaces is supported. The removal of existing seating against the glass side walls is acceptable as the new seating will still increase overall capacity. New seating proposed within the main space of the Concert Hall Southern Foyer will further increase capacity without unduly cluttering the space.

The existing bronze and terrazzo based circular drink tables could be retained in use in these areas and could sit comfortably with the proposed fitout. Due to the limited space, bar stools should be avoided if at all possible.

Creative Learning Centre

The existing configuration of this area will be considerably altered by this proposal, but it will transform an area of separate administration spaces into a more public area with appropriate connections to the Western Foyer and Western and Northern Broadwalks. These spaces have been identified in the CMP as being ideally located for a more public use and the proposed Creative Learning Centre is consistent with this objective.

The works will involve removal of sections of original internal podium walls, including a section of a major curved loadbearing wall. Detail resolution of this opening should be refined in the documentation stage to minimise any potentially negative impacts and retain the integrity of this important concrete element. This will have a moderate but acceptable impact on significant structure within the Podium.

The proposal includes removal and salvage of Peter Hall's wobbly panels from affected spaces and then modifying and re-installing them in a new and dynamic configuration once these spaces have been altered. These alterations will retain and respect Hall's regime and are supported.

The northern most sections of the two main spaces will be fitted out completely with the wobbly panels in the same manner as Peter Hall had intended within the administration areas of the Podium while other parts will have pared back finishes to closely reflect the character of service and backstage areas. Wobbly panels on the walls will conceal storage and other facilities, providing order and flexibility in the manner intended by Hall.

A new lobby is proposed to connect the Western Foyers with the Creative Learning Centre requiring reconfiguration of the existing walls enclosing the stair and Lift 9, and modification of existing storage units at the north end of the Western Foyer. The proposal retains the existing materials and finishes of these elements and will have little visible impact in the Western Foyer. The only visible clue to the presence of the Creative Learning Centre from within the Western Foyer, will be a peep-hole or other device in the entry door, otherwise appearing as a storage cupboard. The exact details of this 'clue' will be refined in the design development stage and should be reviewed at that time. Within the new lobby, mirrored surfaces are proposed to provide a sense of imagination, of entering the world of theatre. While such finishes have not been used elsewhere in the Opera House, they are considered appropriate in this foyer.

The proposed use of stretched reflective membrane ceiling is supported in the entry lobby, but should not be extended into other areas. Details and samples of the 50mm thick perforated metal acoustic panels proposed for ceilings in other areas should be provided at the design development and documentation stages.

Areas and elements of strong colours are proposed in this learning centre, particularly as finishes within and behind the wobbly fronted storage units. This is considered appropriate in a creative learning environment and is consistent with Peter Hall's aesthetic and design regime.

It is strongly recommended that doors, door finishes and hardware within the creative learning spaces should retain and respect the Hall regime, rather than the Utzon regime within the Western Foyer.

In summary, the projects proposed in this application are assessed as being generally consistent with World, National and State listed heritage values, and also with the CMP and Utzon Design Principles.

In accordance with the CMP and Utzon Design Principles, new elements should be tested on site with full size mock-ups or prototypes.

Further design resolution and detailing on these projects should be done in close consultation with the Opera House's heritage architect, Eminent Architects Panel and Conservation Council and approved by them. Design excellence and adherence to the Utzon Design Principles and the CMP should be paramount considerations.

Having considered all the potential impacts, both positive and negative, it is my recommendation that the issues raised in this HIS be noted and addressed, and the projects proposed in this application, namely Under the Steps, Southern Foyers, and Creative Learning Centre be granted approval.

A handwritten signature in black ink, reading "Alan Croker". The signature is fluid and cursive, with a long horizontal stroke at the end.

Alan Croker
Design 5 – Architects

11 November 2016