



**INSTALLATION OF ESCALATORS
& MODIFICATIONS TO EGRESS DOORS**

AT

THE SYDNEY OPERA HOUSE

ENVIRONMENTAL ASSESSMENT

TO ACCOMPANY A MAJOR PROJECT APPLICATION
UNDER PART 3A
OF THE ENVIRONMENTAL PLANNING & ASSESSMENT ACT

Prepared on behalf of
The Sydney Opera House Trust

March 2008

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Executive Summary

It is proposed to carry out internal alterations to The Sydney Opera House to provide two new escalators to link the Box Office Foyer with the Southern Foyers of the Concert Hall and Opera Theatre. The existing Concert Hall Stairs and the Opera Theatre stairs will be modified and narrowed to allow for the incorporation of the escalators into the existing stairwell. It is also proposed to modify the existing door niches from the Southern Foyers to the Podium to allow for better egress from the Foyer to the Podium as a result of the reduced egress arising from the narrowing of the stairs.

The proposed escalators are part of a wider plan to enhance accessibility within the Sydney Opera House and to improve the functioning of the building. They will result in a significant improvement to accessibility for the increasingly elderly demographic of Sydney as reflected by Opera House patronage and those with an ambulant disability.

The proposal is assessed, as required, against all relevant statutory planning controls and policies. Due to the small scale and nature of the proposed works, the only issue to arise in the assessment is the proposal is the impacts on the unique heritage significance of the site and building which has local, state, national and international heritage listings.

Therefore an equally necessary Heritage Impact Assessment is made against the wide range of heritage regulations, controls and policies which apply to the site. That Assessment report finds that the proposal will have some impact on the significant spaces within the Sydney Opera House and on the arrival experience, however the design has been developed such that the impacts are now considered acceptable. This is especially the case when the impacts are balanced against the positive outcome of the proposal, specifically providing greater and more equitable public access to these significant spaces and thereby enhancing the experience of the site's heritage value as a visual, cultural and world wide tourist icon.

Prior to lodgement of the application, consultation was undertaken out with various agencies and authorities and no objection has been raised to the proposal.

The proposal is therefore recommended for approval based upon its positive overall contribution to the enhancement of cultural heritage value of the original Opera House.

1. INTRODUCTION

This Environmental Assessment is submitted to the Department of Planning to accompany a Major Projects Application under Part 3A of the Environmental Planning and Assessment Act 1979 for development to be carried out on a State Significant Site, being the site of The Sydney Opera House.

The Department's reference no for the application is **MP 07_0142**.

The proposal includes limited internal alterations to The Sydney Opera House to provide two new escalators to link the Box Office Foyer with the Southern Foyers of the Concert Hall and Opera Theatre. It is also proposed to modify the existing door niches from the Southern Foyers to the Podium. For a full description of the proposal refer to **Section 4**.

This Environmental Assessment has been carried out independently by Byrnes and Associates on behalf of The Sydney Opera House Trust and is based on the information provided by The Trust including:

- Plans and Section drawings by Utzon Architects Nos DA001 – DA004
- Architects' Statement by Utzon Architects & Johnson Pilton Walker
- Statement of Heritage Impact by Design 5 Architects
- Structural Engineers Report by ARUP
- Work Method Statement by John Holland Group
- Summary of Consultations

This assessment addresses the Director General's requirements set out in the Annexure to the Department's undated letter to Catherine Hyland (copy at **Annexure A**).

It provides a description of the site (**Section 2**), background to the proposal and reasons for the proposed development (**Section 3**) and a detailed description of the proposal (**Section 4**)

It also addresses the Key Issues raised by the Director General and the following table outlines the further sections where those Key Issues are addressed:

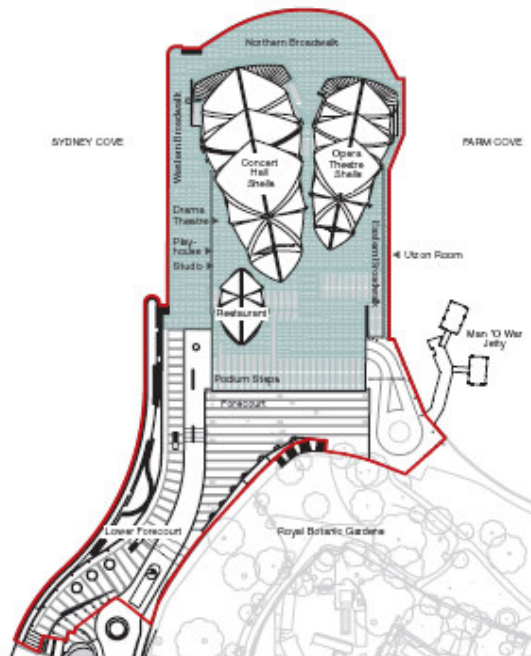
Key Issue	Where Addressed
1. Statutory & Other Requirements: <ul style="list-style-type: none"> • Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 • State Environmental Planning Policy (Major Projects) 2005; • The Sydney Harbour Foreshores Area DCP; • Environment Protection and Biodiversity Conservation Act 1999; • The Heritage Act 1977 	Refer to Section 5 of this report: Section 5.4.1 Section 5.3 Section 5.4.2 Section 5.1 Section 5.2
2. Design, Visual Impacts and Design Quality Principles	Section 6.1 Architects' Statement (Annexure B)
3. Heritage	Section 6.2 Statement of Heritage Impact (Annexure C)
4. Management Plan for the Sydney Opera House	Section 6.3
5. Structural Engineers Report	Section 6.4 Copy of Report at Annexure D
6. Work Method Statement	Section 6.5 Copy of Report at Annexure E
7. Storage / Disposal Strategy	Section 6.6

Details of the consultation process are outlined in **Section 7**.

The conclusion is provided in **Section 8**.

2. SITE DETAILS

The site of The Sydney Opera House has the real property reference of *Lot 5 in Deposited Plan 775888* and *Lot 4 in Deposited Plan 787933*. The location of the building is usually referred to as Bennelong Point. The boundary of The Sydney Opera House under the Sydney Opera House Trust Act 1961 is shown in the following plan:



The site of The Sydney Opera House and its relationship to the city of Sydney and Circular Quay in particular, is very well known. A very significant proportion of the Australian population has either visited The Sydney Opera House and its surroundings or has seen them illustrated through the popular media. Beyond that, the site is inextricably related to a world perception of Australia and its attributes, and the public that is aware of the site extends well beyond the borders of the nation. Its recent inclusion on the UNESCO World Heritage List demonstrates its world wide importance as an item of cultural heritage.

The Sydney Opera House serves as one of the visual buttresses to the principal entry to central Sydney via Circular Quay with the other being the Sydney Harbour Bridge. In addition, because of its location on a promontory, The Sydney Opera House constitutes an exceptionally visible and obvious component of the Sydney Harbour panorama with a background provided by the towers of the city itself.

The Sydney Opera House was originally designed by Danish Architect Jørn Utzon who won the design competition for the site in 1957.

In 1999 Jørn Utzon was engaged to create a set of design principles for the Sydney Opera House and following a New South Wales Government grant in 2001, a Venue Improvement Plan and Strategic Building Plan were established, aimed at redressing some of the practical limitations affecting the day-to-day workings of Sydney Opera House while preserving its unique heritage. As a result various upgrade and refurbishment works having been carried in recent years with the Western Foyers upgrade project currently under construction.

3. BACKGROUND: ACCESS ISSUES & OPTIONS

Community expectations have changed since the Opera House was first constructed. There is now a recognised need to provide equitable access for all persons within the Sydney Opera House. The *Strategic Building Plan* (2001) aims to enhance accessibility within the Sydney Opera House and includes provision for both new escalators and lifts to improve the functioning of the building.

As part of the Western Foyers upgrade project currently under construction, a new lift is being installed which will provide long overdue public access from the Lower Concourse level to the Box Office level. However from the Box Office Level to the Southern Foyers there is currently only limited access to lifts. Access is via back of house lifts which must be pre-arranged and with assistance from staff.

The Sydney Opera House Conservation Management Plan (refer **Section 6.3**) also recognises the need for further improved access through mechanical assistance to the Concert Hall and Opera Theatre Foyers. As a result the *Sydney Opera House Venue Improvement Program - Box Office Foyer Facility Brief* (January 2005) identified the necessary provision for accessibility via escalators between the Box Office level and Southern Foyers.

The possibility of escalators suitable for wheelchairs was investigated as part of the brief; however no supplier is located within Australia. There are cumulative safety concerns, legislative constraints and servicing difficulties which currently prohibit the installation of wheelchair accessible escalators.

As such it proposed to provide standard escalators which will have a significant impact on the broader considerations for facilitating accessibility to serve the increasingly elderly demographic of Sydney Opera House patrons but in particular those patrons with an ambulant disability now routinely catered for in any new and otherwise public building. Access for wheelchair users will continue to be via back of house lifts.

Alternatives

Due to the heritage significance of the site and some concern that the proposed escalators would not address the needs of wheelchair users a number of alternatives were considered. These are discussed in detail in the Statement of Heritage Impact at **Annexure C** and are summarised as follows:

(i) *Escalators which can also carry wheelchairs*

No manufacturer will supply to Australia. The proposed escalators can be converted if a product becomes available in the future.

(ii) *Alternative Escalator locations*

Structural and space constraints made alternative locations unviable.

(iii) *New public lifts between Box Office & Southern Foyers*

An accessible public lift was investigated beside the existing stair but not viable due to impacts on service areas, structure, and OH&S constraints. Alternative lift locations are still under review as part of investigations into future upgrade works.

4. DESCRIPTION OF THE PROPOSAL

It is proposed to carry out internal alterations to The Sydney Opera House to provide two new escalators to link the Box Office Foyer with the Southern Foyers of the Concert Hall and Opera Theatre.

The existing Concert Hall Stairs and the Opera Theatre stairs will be modified and narrowed to allow for the incorporation of the escalators into the existing stairwell.

The proposed changes are demonstrated in plan and elevation on Drawings DA001 – DA004 submitted with this application. The following photomontages from the Architect's Statement depict pictorially the proposed changes:



Existing and Proposed Concert Hall Stairs as viewed from the Box Office Foyer



Existing and Proposed Opera Theatre Stairs as viewed from the Southern Foyer

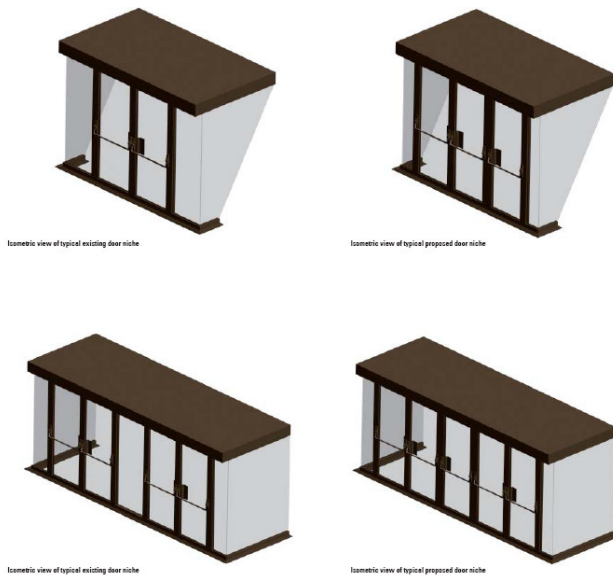
The escalators will have a tread width of 1000mm. Balustrading will be of clear safety glass with typical dark finish rubber handrail. Skirting and decking will be of stainless steel and treads will be aluminium with receding finish. Subtle lighting will be provided for safety at skirting level.

As depicted in the photomontages the escalators will be separated from the stairs themselves by a dividing precast wall to visually separate the different geometry of the escalators and stairs. The wall will be of reconstructed granite precast panels to match the existing walls. It will include a bronze handrail to match the existing handrails.

It is also proposed to modify the existing door niches from the Southern Foyers to the Podium. The proposed modification will provide for clearer opening width allowing better egress from the Foyer to the Podium. The proposed change is to compensate for the loss of egress on the stairways arising from the incorporation of the escalators.

There are 10 door niches on the Southern Foyer level which would be altered under the proposal (Refer to Drawing number DA-002). It is proposed to introduce 3 doors where there are presently 2 and to introduce 5 doors where there are presently 4. Materials and door dimensions will match those existing.

An isometric view of the door niche is provided in the Architect's Statement and reproduced here to give an indication of the proposal.



A work method statement is included at Annexure E and details how the project will be implemented. See Section 6.5 below for further details in this regard. Work approved under this application will form part of the overall Western Foyers upgrade project. The installation of the escalators and replacement of the doors is likely to commence later this year at the earliest and is due for completion by July 2009.

5. STATUTORY PLANNING CONSIDERATIONS

5.1 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT (CTH) 1999 (EPBC ACT)

Actions that significantly affect matters of national environmental significance (including World Heritage Sites) require approval under the Act. In accordance with '*Significant Impact Guidelines 1.1: Matters of National Environmental Significance*', the proposal would be said to significantly affect a site of World Heritage if it were to "*permanently remove, destroy, damage or substantially alter the fabric of a World Heritage property*".

As compared to the overall scale of the Sydney Opera House the extent of the proposed alterations is relatively minor. It is unlikely that the proposed works could be considered a 'substantial' alteration to the fabric of The Sydney Opera House and therefore there may be no requirement for approval under the EPBC Act.

However even if approval is required under the Act, a bilateral agreement established in December 2005 between the Commonwealth and NSW governments allows the assessment regimes under the *Environmental Planning and Assessment Act 1979* (Including Part 3A) to be automatically accredited under the EPBC Act. The terms of the agreement require that the proposed actions be in accordance with the *Management Plan for the Sydney Opera House* in force under the *Environmental Planning and Assessment Amendment (Sydney Opera House Management Plan) Regulation 2005*. Refer to the discussion below at **Section 6.3** of this report where it is demonstrated that the proposal is consistent with the requirements of the Management Plan for The Sydney Opera House.

5.2 HERITAGE ACT (NSW) 1977

In accordance with section 75U of the Environmental Planning and Assessment Act, an approval under Part 4 of the Heritage Act is not required for approved projects under Part 3A. However the Management Plan for the Sydney Opera House in force under the *Environmental Planning and Assessment Amendment (Sydney Opera House Management Plan) Regulation 2005* states that Development on the Sydney Opera House site assessed under Part 3A will also require approval under Part 4 of the Heritage Act. The Management plan advises that this approval is to be sought after the Minister's approval under part 3A.

When approval from the Heritage Council is sought under part 4 of the Heritage Act, the following matters would be considered:

- (a) the extent to which that application, if approved, would affect the significance of any item as an item of the environmental heritage,*
- (b) the representations, if any, made with respect to that application under section 61(3),*
- (c) such matters relating to the conservation of that item or land as to it seem relevant, and*
- (d) such other matters as to it seem relevant.*

A Heritage Impact Statement by Design 5 Architects at **Annexure C** addresses makes a full assessment of the proposal with regard to heritage considerations. Refer also to **Section 6.2** below in relation to heritage where it is demonstrated that the application will have no detrimental impact on the heritage significance of the item.

5.3 STATE ENVIRONMENTAL PLANNING POLICY (MAJOR PROJECTS) 2005

This SEPP designates the site as a State Significant site. Schedule 3 of the SEPP outlines planning controls and matters for consideration for various State Significant sites. However, in the case of The Sydney Opera House, there are no other provisions or controls on the carrying out of development, other than in relation to Exempt Development on The Sydney Opera House Site. The SEPP provides the framework for assessment of State Significant projects. This Environmental Assessment has been prepared in response to the Director General's Requirements in accordance with Part 3A of the Environmental Planning and Assessment Act.

5.4 OTHER ENVIRONMENTAL PLANNING INSTRUMENTS & CONTROLS

Section 75R(3) of the Environmental Planning and Assessment Act provides that Environmental Planning Instruments (other than State Environmental Planning Policies) do not apply to or in respect of an approved project. Other than the Major Projects SEPP, no other planning instruments are applicable to the proposal.

However, in accordance with Section 75J(3) the Minister may take into account the provisions of an environmental planning instrument that would have governed the carrying out of the proposal had it been assessed under Part 4 of the Act. In this case the Director General has advised that consideration is to

be given to the *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005* and *The Sydney Harbour Foreshores Area Development Control Plan 2005*:

5.4.1 Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (REP)

The Sydney Opera House Site falls within the *Sydney Harbour Catchment Area* designated in the REP. It also is within the *Foreshores and Waterways area* and the 'City Foreshore Area' designated as a Strategic Foreshore Site. It is also a Heritage item under the Plan. The following table sets out the relevant provisions applicable under the REP.

Clause	Discussion
Clause 13 – Sydney Harbour Catchment Planning Principles	<p>A wide range of principles concerned primarily with protecting the health of the harbour. Issues relate to water quality and drainage, vegetation, land and soils, none of which are relevant to the application in this case.</p> <p>Other principles relate to the scenic qualities of the harbour and publicly accessible vantage points. The proposed alterations to the doorways are minor and will not impact on the Scenic qualities of the Harbour. Refer to discussion below. The Southern Foyers are vantage point for viewing the harbour and the proposed escalators can only increase accessibility to the area, consistent with the objective.</p>
Clause 14 – Foreshores and Waterways Planning Principles	<p>Relevant Principles are concerned with protecting and maintaining the visual qualities of the Harbour and Foreshores. The proposed development primarily relates to internal works. The proposed alterations to the doorways are minor and will not result in any change to the dimensions of the doors or the materials. As such they would not be discernible from the Harbour or foreshores and will have no impact on the visual qualities of the area. Refer also to discussion under Section 6.1 below and to Architect's Statement at Annexure B.</p> <p>As the proposed development does not impact on foreshore access, is not related to an industrial or commercial maritime purpose and it not related to boating facilities, the remainder of the objectives are not applicable.</p>
Clause 15 – Heritage Conservation Planning Principles	<p>Relevant Principles in this case include:</p> <ul style="list-style-type: none"> (a) <i>Sydney Harbour and its islands and foreshores should be recognised and protected as places of exceptional heritage significance,</i> (b) <i>the heritage significance of particular heritage items in and around Sydney Harbour should be recognised and conserved,</i> (c) <i>an appreciation of the role of Sydney Harbour in the history of Aboriginal and European settlement should be encouraged,</i> (d) <i>the natural, scenic, environmental and cultural qualities of the Foreshores and Waterways Area should be protected,</i> (e) <i>significant fabric, settings, relics and views associated with the heritage significance of heritage items should be conserved,</i> <p>Refer to discussion below in Section 6.2 and Heritage Impact Statement by Design 5 architects at Annexure C which demonstrates that the heritage significance of the Sydney Opera House will be conserved under the proposal in accordance with principles (b) and (e). As the proposed works will not be discernible from outside the building there will be no impact to the significance of the Harbour, no impact to appreciation of settlement history and no impact to the scenic qualities of the Foreshores or Waterways, consistent with principles (a), (c) and (d).</p>

Clause 53 – Heritage Objectives	<p>The relevant objective in this case is “to conserve the heritage significance of existing significant fabric, relics, settings and views associated with the heritage significance of heritage items”</p> <p>Refer to discussion below in Section 6.2 and Heritage Impact Statement by Design 5 architects at Annexure C which demonstrates compliance with the objectives under cl 53.</p> <p>It is noted that further objectives apply to the Sydney Opera House Buffer Zone. However as the proposed works relate to The Sydney Opera House itself and not the buffer zone those objectives are not relevant in this case.</p>
Clause 55 – Protection of Heritage Items	<p>Requires that the Consent Authority must assess the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item concerned and that assessment must include consideration of a heritage impact statement.</p> <p>Refer to discussion below in Section 6.2 and Heritage Impact Statement by Design 5 architects at Annexure C.</p>

5.4.2 Sydney Harbour Foreshores Area Development Control Plan 2005

Although designated for consideration by the Director-General, the DCP does not include any controls of relevance to the proposed development. Section 5 of the DCP includes design guidelines for Land-Based Developments, however given that the proposed works are limited and internal, have no impact on the overall external built form of The Sydney Opera House and have no impact on Foreshore Access, there are no controls of relevance to the proposal under the DCP 2006.

6. OTHER MATTERS FOR CONSIDERATION

Other than consideration of the Statutory Controls, the Director General has advised that the following matters must also be addressed in the Environmental Assessment:

6.1 DESIGN, VISUAL IMPACTS AND DESIGN QUALITY PRINCIPLES

The proposed development has been designed by both Utzon Architects and Johnson Pilton Walker Architects in Collaboration. They have prepared an Architect's Statement attached at **Annexure B** that discusses the visual appearance of the proposal in detail. Photomontages are included in the statement which demonstrate the visual impacts of the proposal.

The proposed escalators, associated separation wall, hand rails and lighting as detailed in **Section 4** above have been carefully designed to be in harmony with the existing stairway fabric and spaces.

It is considered that the most important element of the stair spaces is their upward movement and the vertical compression of space opening up to the Foyer levels. This element is retained under the proposal. However although the escalators result in a reduction in the width of the stair space, the generosity of the space itself is maintained in circumstances where the horizontal width is considered to be relatively less important. The impact of the small reduction in width is therefore assessed to be acceptable in this case.

As described above the proposed alterations to the egress doors to the podium are the only changes proposed which will be visible from outside the building. As there is no change to the overall size of the door niches and materials would match those existing the alterations are unlikely to be discernible and are of such a minor nature they will not materially affect the visual comprehension of the building as currently perceived.

6.2 HERITAGE

The Statement of Heritage Impact prepared by Design 5 Architects at **Annexure C** provides a comprehensive assessment of the proposed development and its impact on the heritage significance of the Sydney Opera House.

The Heritage Impact report considers the impacts of the proposal on the heritage significance of the site arising from the various listings of the site from World Heritage listing to National, State and Local listings and associated statements of heritage significance and heritage values.

The report finds that the various listings identify primarily the same values for the place and that the management of those values is comprehensively addressed through two principle documents: The Utzon Design Principles and Conservation Management Plan 2003. The report finds that the proposal is fully compliant with the Design Principles and The CMP. (Refer also to discussion of these documents in **Section 6.3** below).

However despite compliance with the relevant Utzon Design Principles and the Conservation Management Plan, it is considered that the proposal will have an impact on the significant spaces within the Sydney Opera House and on the arrival experience.

Impacts include a slight 'cramping' of the stair widths. However as these are already very generous and the proposed blade wall will still allow the original size of the opening to be easily interpreted, the extent of the impact is considered acceptable. Views of the folded beam canopy at the top of the stairs will be partially obscured and there will be a visual disparity between the width of the canopy and the reduced width of the stairs. This will be more apparent on exit than on approach but as it is the entry sequence which is considered most important and dramatic, the impact in this case is also considered acceptable.

Against these negative marginal impacts on visual experience must be balanced the positive outcome of the proposal, specifically providing greater and more equitable public access to these significant spaces without diminishing only changing the visual experience and thereby enhancing the site's overall cultural value.

The report finds the alterations to the egress doors will either have no impact or otherwise a positive one in that the proposal will allow freer and more open access between the Southern Foyers and the Podium, in conformity with Utzon's original vision but with no difference in principle or readily discernible dimensional change to the general appearance of the openings themselves.

The Heritage Impact report makes a number of recommendations regarding finishes, detailing and lighting and it is proposed to adopt all of the recommendations outlined in that report. In saying that it should be noted that the report suggests that the width of the escalator treads should be maximised. The

Building Code of Australia and relevant Australian Standards restrict the tread width to 1000mm. The proposed width is therefore already at the maximum allowable.

The Heritage Impact Statement recommends that the proposal be approved.

6.3 MANAGEMENT PLAN FOR THE SYDNEY OPERA HOUSE

As discussed above in Section 5.1 a Management Plan for the Sydney Opera House is required to be considered under the provisions of the bilateral agreement under the Environment Protection and Biodiversity Conservation Act and the provisions of the Environmental Planning and Assessment Amendment (Sydney Opera House Management Plan) Regulation 2005.

The Management Plan sets out the Statutory Framework for the assessment and approvals process and provides a brief summary of the World Heritage values and National Heritage values of the Sydney Opera House. It does not in itself provide the policies that are to protect and conserve the National and World heritage values of the site but rather relies on two additional documents which are appendixes to the Management Plan. These are:

- *Sydney Opera House: A revised Plan for the Conservation of the Sydney Opera House and its Site (3rd edition 2003) ("The Conservation Management Plan (CMP)"; and*
- *Utzon Design Principles (2002)*

Consideration of the Management Plan therefore requires consideration of the relevant principles and policies established in these documents.

6.3.1 Sydney Opera House: A Revised Plan for the Conservation of the Sydney Opera House and its Site (3rd edition 2003)

The Conservation Management Plan provides an assessment of the significance of the Sydney Opera House and establishes conservation policies based on the identified heritage values of the site.

The Architect's Statement at **Annexure B** and the Statement of Heritage Impact at **Annexure C** identify 5 policies in the Conservation Management Plan of relevance to the proposed development. Both these documents (in particular the Statement of Heritage Impact) discuss the proposal's consistency with the CMP policies at some length. The discussions are not replicated in detail here, but the following table provides a brief summary of the policies and compliance of the development.

Policy	Discussion
Policy 1.1: Carry out work within the framework of Utzon's design principles.	Proposal fully complies with principles. Refer to discussion under Section 6.3.2 below.
Policy 1.4: Interiors designed by Hall should retain the character of the original design.	The spaces are really Utzon spaces and pursuing an Utzon designed solution is appropriate in this case.
Policy 1.5: Works are acceptable where technical advance, expert advice, design quality, resources and construction combine to create facilities that improve function and significance provided that the work in the context of an overall plan and in accordance with Policy 56.1 on the management of change.	Expert advice and design quality have come together to design the proposed alterations which will improve the functioning of the Sydney Opera House in the context of a revised access strategy and in accordance with policy 56.1. Resources and construction will be relevant in the construction phase. Technical advance has limited relevance in this case.
Policy 17.1: Arrival sequences with their different and changing experiences should be retained to the stairways, box office foyers and auditoria foyers.	Although the stairs are altered, the escalators are located at the outer edge of visual focus and the arrival experience of upward movement and vertical compression of space opening to the Southern Foyers is retained.
Policy 18.1: Any proposal to improve access between levels should not vitiate Utzon's concept for the sequence of spaces; interrupt the original structural systems; or result in the cramping of spaces.	Sequence of spaces is retained. The proposed wall separating the escalators from the stairs will partially obscure the lower portion of folded and cranked beams as viewed from the Southern Foyer but is not considered substantial enough to warrant concern. The existing stair widths are very generous and a small reduction in width under the proposal is considered acceptable.

6.3.2 Utzon Design Principles (2002)

This document provides statements and design principles from Jørn Utzon, the Architect for the Sydney Opera House. It provides a best practice guide for the future management and development of the site.

While the escalators themselves or any additional wall are not specifically included in the Utzon Design Principles, it is important to note that Jørn Utzon has given consideration to the proposal and has recommended that escalator access is possible between the Box Office Foyer and the Southern Foyers provided they adhere to certain guidelines. Those guidelines include locating the escalators on the east and west sides of the stairs; separating them from the stairs by a precast wall matching existing side walls; relating the wall to the canopy above but not touching it; and retention of existing handrails. The guidelines are discussed in both the Architects' Statement at **Annexure B** and the Heritage Impact Statement at **Annexure C** and it is clear that the proposal fits within the guidelines and thus complies with Utzon's more recent and specific design principles.

The Utzon Design principles set out in the 2002 document of relevance to the proposal include:

- Orientation and Movement;
- Additive Architecture;
- Light; and
- Process.

The Architect's Statement written by Utzon Architects and Johnson Pilton Walker Architects in collaboration at **Annexure B** demonstrates the proposal's compliance with each these four design principles. The location of the escalators at the outer edge of the visual focus and the use of a separation wall and specific materials and light fixtures have all been carefully designed and chosen to ensure compliance with these relevant principles. Refer to page 15 of that Report for a detailed discussion of the proposals compliance with the principles.

6.4 STRUCTURAL DETAILS

A structural summary is provided on Page 14 of the Architects Statement at **Annexure B**. As required by the Director General a Structural Engineers Report by ARUP has been prepared outlining the impacts of the proposal on the structural integrity of the Sydney Opera House. The report is included at **Annexure D** and confirms the viability of the proposed escalators.

6.5 WORK METHOD STATEMENT

A Work Method Statement has been prepared by John Holland Group and is attached at **Annexure E**. To ensure the protection of the surrounding heritage fabric it is proposed to erect a hoarding to close off the work areas. A plan of the hoarding locations is included in the Statement. It is proposed to crane the escalators onto the western concourse and then use a framing system and forklifts to lower the escalators into place. The Southern glazed bronze doors and adjacent viewing panel will need to be removed to facilitate the installation, as will the handrails to the foyers and food and beverage bars. All will be reinstated on completion of the installation. During construction work plywood will be used to protect all affected precast floor panels and door frames from damage.

6.6 STORAGE / DISPOSAL

There is very little historic material to be removed as a result of the proposal. A narrow section of the existing stairs will be removed to allow for the installation of the escalators. Due to the small size of the pieces to be removed they are considered unsuitable for re-use and will be disposed of to landfill.

7. CONSULTATION

In accordance with the requirements set by the Director General the following agencies and Authorities were consulted about the proposal:

- City of Sydney Council;
- Heritage Council of NSW;
- NSW Heritage Office;
- Department of the Environment, Water, Heritage and the Arts;
- Sydney Harbour Foreshore Authority;
- Sydney Opera House Conservation Council; and
- Sydney Opera House Building Trust Committee

A summary on the consultation carried out is included at **Annexure F**.

Note that the Director General's requirements included consultation with the Australian Heritage Council. There is no Australian Heritage Council. Rather, consultation was carried out with the Department of the Environment, Water, Heritage and the Arts.

The proposal was endorsed by the Sydney Opera House Conservation Council and the Sydney Opera House Building Trust Committee.

No objection has been raised by any of the other bodies consulted.

8. CONCLUSION

The proposal to provide two new escalators to the Sydney Opera House has been assessed having regard to both the statutory requirements applicable to the development and the matters for consideration raised by the Director General.

Due to the site's significant heritage status there are numerous statutory considerations and requirements in place to ensure a detailed and comprehensive assessment of any proposal and to assure the significance of the building is retained. Other than matters relating to Heritage, no planning issues arise for consideration in the assessment of the application.

The management of the heritage values of the Sydney Opera House is primarily addressed through two principle documents: The Utzon Design Principles and Conservation Management Plan 2003. This report, in conjunction with the Architect's Statement and The Statement of Heritage Impact demonstrates that the proposal is fully compliant with the Design Principles and The Conservation Management Plan.

It is acknowledged that the proposal will result in some impact on the significant Foyer space within the Sydney Opera House. However, as assessed separately in both heritage and architectural terms, these impacts are considered marginal. They are assessed to not significantly diminish, but only change, the visual experience of the place.

Aesthetic outcome is not the only consideration of cultural heritage. Facilitating greater and more equitable public access enhances, by expanded opportunity for access, the public's experience of the site and therefore the building's overall cultural value.

On this basis, after careful consideration of all the relevant concerns that have been identified, the proposed development is therefore considered suitable for approval.

Statement of Validity

Submission of Environmental Assessment

Prepared under part 3A of the Environmental Planning and Assessment Act 1979

Environmental Assessment prepared by:

Name: Terence P Byrnes

Qualifications: 1967 Master in City Planning (Honours), Yale University.

1962 Diploma in Architecture (Credit), University of New South Wales (formerly
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SYDNEY NSW 2000

In Respect of:

Application for New Escalators in the Sydney Opera House

Certification:

I certify that I have prepared the content of this Environmental Assessment and to the best of my knowledge it is in accordance with the Environment Planning and Assessment Regulation 2000 and the information which it contains is neither false nor misleading.



Terence P Byrnes

3 March 2008

Date