



DEPARTMENT OF PLANNING
AND INFRASTRUCTURE

MAJOR PROJECT ASSESSMENT – SYDNEY OPERA HOUSE INTERNAL ESCALATORS (MP 07_0142)

2 Circular Quay and Macquarie Street,
Bennelong Point, Sydney.

Director-General's Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

May 2008



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1. EXECUTIVE SUMMARY

This is a report on a Project Application seeking approval for the installation of 2 internal escalators, to link the Box Office Foyer with the Southern Foyers of the Concert Hall and Opera Theatre, and alterations to the existing external doors to the Southern Foyer podium, at the Sydney Opera House.

The site of the Sydney Opera House has the real property description of Lot 4 DP787933 and Lot 5 DP77588, with a street address of 2 Circular Quay and Macquarie Street, Sydney.

The Sydney Opera House Trust (the Proponent) is a statutory body representing the Crown, established under the *Sydney Opera House Trust Act 1961*, and operates as one of the State's cultural institutions within the Arts portfolio.

The Proposal is to install escalators between the Sydney Opera House Box Office and Southern Foyers, and modification to the existing egress doors to the Southern Foyer podium. The escalators will service the Concert Hall and Opera Theatre from the Box Office Foyer, improving accessibility between the Box Office and Southern Foyers, within the existing Sydney Opera House.

The estimated project cost of the development is \$2.6 Million.

The Project Application was lodged with the Department on 6 March 2008 in accordance with the *Environmental Planning and Assessment Act, 1979* (the EP&A Act).

The EA was exhibited for a period of 30 days, between 2 April 2008 and 2 May 2008. During the exhibition period, the Department received a total of 5 submissions from public authorities, however no submissions were received from the public. Key issues raised by public authorities and the Department have been considered in the Department's assessment of the application, including the following:

- Heritage impacts;
- Views and Visual Impacts;
- Accessibility;
- Construction Impacts; and
- The Public Interest.

The Department has assessed the merits of the project and is satisfied that the impacts of the proposed development have been adequately addressed by the Proponent, and the Department's recommended conditions of consent. On these grounds, the Department is satisfied that the site is suitable for the proposed development and that the project will provide social benefits in the respect that accessibility to the Concert Hall and Opera Theatre will be greatly improved.

The proposal has met all statutory requirements, and will be submitted to the Heritage Office for approval under Part 4 of the Heritage Act 1977, in accordance with the *Management Plan for the Sydney Opera House (2005)*, in force under Section 288 of the *Environmental Planning and Assessment Regulation 2000*. This approval is granted by the Heritage Office and is sought after the Minister's approval under Part 3A of the *EP&A Act*.

The Department recommends that the project be approved, subject to conditions.

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2. BACKGROUND

2.1 THE SITE

2.1.1 SITE CONTEXT AND LOCATION

The site of the Sydney Opera House has the real property description of Lot 4 DP787933 and Lot 5 DP77588, with a street address of 2 Circular Quay and Macquarie Street, Sydney. The site is generally bordered by Sydney Harbour to the north, east and west, and by the Sydney Royal Botanic Gardens to the south (refer to Figure 1). The site is within the local government area of the City of Sydney.

The Sydney Opera House, along with the Sydney Harbour Bridge, constitutes an exceptionally visible and obvious component of the Sydney Harbour panorama, due to its location on a peninsula, and the design of the building itself. The building and its surroundings are one of Australia's best known icons.

The Sydney Opera House is operated and maintained for the state of New South Wales by the Sydney Opera House Trust, a statutory body under the *Sydney Opera House Trust Act 1961*.

On 28 June 2007, the Sydney Opera House was included on the UNESCO World Heritage List, listed as a great architectural work of the 20th century, both in architectural form and structural design. As a result of the sites World Heritage Listing, all approvals for the Sydney Opera House site, under Part 3A of the EP&A Act, also require approval under Part 4 of the *Heritage Act 1977*.



Figure 1: Aerial View of the Site

2.1.2 EXISTING SITE FEATURES

The Sydney Opera House was designed by Jørn Utzon and Ove Arup & Partners, winner of the 1957 design competition for the site. After a lengthy period of construction, the Sydney Opera House was formally opened on 20 October 1973.

The Sydney Opera House is 183 metres long and has a width of 120 metres at its widest point, and covers a total of 1.8 hectares. The Sydney Opera House is an expressionist modern design, with a series of large precast concrete panels ('shells'), supported by precast concrete ribs, forming the roofs of the structure. The roofs of the Sydney Opera House are covered with 1.056 million glossy white and matte cream tiles.

These shell structures are set upon a vast platform and are surrounded by terrace areas that function as pedestrian concourses. The 2 largest 'shells' contain the main performance halls – the Concert Hall and Opera Theatre (see Figure 2). The smaller 'shell' contains the Bennelong Restaurant. The remaining performance spaces of the Sydney Opera House are located on the sides of the 2 larger shell groupings.



Figure 2 – The Sydney Opera House site.

The Box Office Foyer is located on Level 30 of the Sydney Opera House, whilst the Southern Foyer's are located on Level 42, one level above, and consist of the foyers of the Opera Theatre and the Concert Hall. These foyers are separated by the external podium area. The Concert Hall, with 2679 seats, is the home of the Sydney Symphony, and used by a large number of other

concert presenters. The Opera Theatre, a proscenium theatre with 1547 seats, is the Sydney home of Opera Australia and The Australian Ballet.

2.1.3 SURROUNDING DEVELOPMENT

The location of the Sydney Opera House, on a promontory, results in the site being bordered to the north, east and west by Sydney Harbour. To the south of the site, the bulk of surrounding development consists of the Sydney Royal Botanic Gardens, with some high-density residential development located in apartment buildings to the south-west of the site. However, the Sydney Opera House is removed from these residences by approximately 200 metres, at the closest point.

The nearest street is Macquarie Street which terminates in a roundabout approximately 100 metres from the steps leading up to the Sydney Opera House.

2.1.4 ZONING

The site is zoned Parks and Community Places under the Sydney Local Environment Plan 2005 (LEP 2005). The proposal is permissible with approval and is consistent with the objectives of the Parks and Community Places zone. Section 4.2 of this report demonstrates that the proposal is consistent with these objectives and is therefore permissible with the Minister's approval.

2.2 ORIGINS OF THE CURRENT PROPOSAL

Community expectations have changed since the Opera House was first constructed. There is now a recognised need to provide more equitable access for all patrons within the Sydney Opera House. In 1999, Jørn Utzon was re-engaged to create a set of design principles for the Sydney Opera House, to act as a guide for all future changes to the building. A *Venue Improvement Plan* (2001) and *Strategic Building Plan* (2001) were established, aimed at addressing some of the practical limitations affecting the functionality of Sydney Opera House while preserving its unique heritage.

As a result, various upgrade and refurbishment works have been carried out in recent years as part of the Accessibility and Western Foyers Project, including:

- The Colonnade project, which provided 9 openings in the western façade to open the Western Foyers to its Harbour setting; and
- The Bennelong Lift, which will provide improved public access and connect the Lower Concourse, Western Foyers and Box Office Foyer. Patrons will reach the lift by way of a new corridor opposite the Sydney Opera House Shop on the Lower Concourse level.

However, there is still only limited access to lifts from the Box Office Level to the Southern Foyers. Lift access is via back of house lifts which must be pre-arranged and with assistance from staff. There is a recognised need for further improved access through mechanical assistance to the Concert Hall and Opera Theatre Foyers. The current proposal is the result of this identified need.

2.3 PROJECT CHRONOLOGY

- On 31 October 2007, the proponent requested a Clause 6 opinion and issue of the Director-General's Environmental Assessment Requirements (DGRs);
- On 20 November 2007, the Director General as Delegate of the Minister formed the opinion that the proposal is a Project and that Part 3A of the EP&A Act applied.
- On 6 December 2007, the DGRs were issued.
- On 6 March 2008, the Environmental Assessment (EA) was lodged with the Department.
- From 2 April 2008 to 2 May 2008, the EA was placed on public exhibition.
- On 9 May 2008, the Department forwarded a copy of the submissions received during the exhibition period to the Proponent.

3. PROPOSED DEVELOPMENT

3.1 INSTALLATION OF ESCALATORS AND MODIFICATIONS TO EGRESS DOORS

It is proposed to carry out internal alterations to the Sydney Opera House, to provide 2 new escalators to link the Box Office Foyer Level with the Southern Foyers of the Concert Hall and Opera Theatre (see Figure 3). 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.

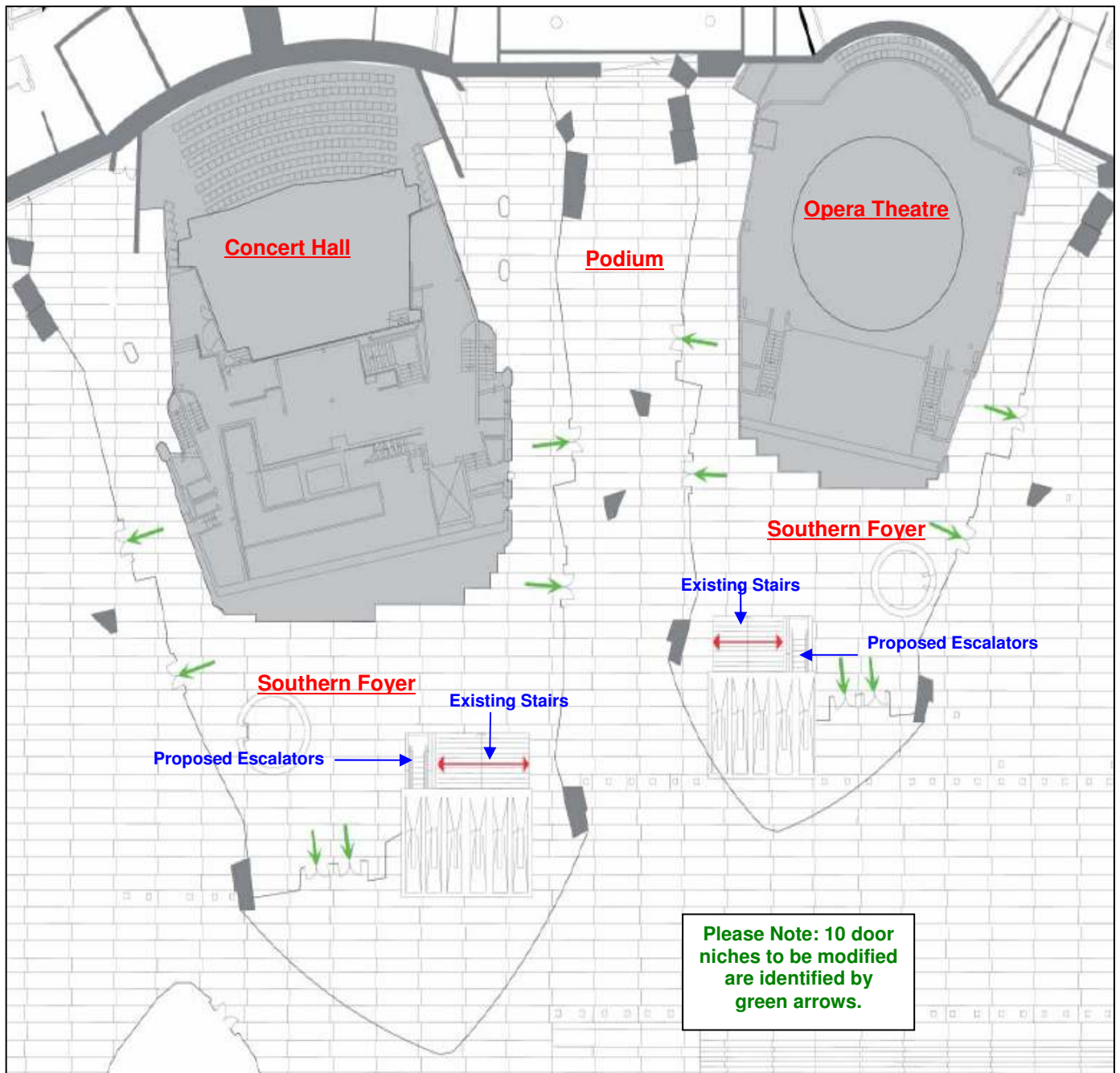


Figure 3: Southern Foyer Level of the Opera House –Opera Theatre and Concert Hall

The proposed works will consist of the following:

- The escalators will have a tread width of 1000mm;

- The existing Concert Hall and Opera Theatre stairs will be modified and each narrowed by approximately 3 metres, to allow for the incorporation of the escalators into the existing stairwell;
- The Concert Hall Stairs will be reduced to approximately 7.5 metres, whilst the Opera Theatre Stairs will be reduced to approximately 5.5 metres;
- The rake of the escalator will be the industry standard of 30 degrees, whereas the existing staircases have a rake of 19.7 degrees separated by the 1.46 metre long mid-landing;
- The escalators will be separated from the stairs by a dividing precast wall to visually separate the escalators and stairs (see Figure 4). The wall will consist of reconstructed granite precast panels to match the existing walls;
- A reinforced concrete wall and slab will be constructed between the escalator and the stair to create the fire rated escalator pit and to provide support to the new precast wall panels;
- Handrails will be bronze to match the existing handrails whilst the balustrades will consist of clear safety glass with typical dark finish rubber handrail;
- Skirting and decking will be of stainless steel and treads will be aluminium with a receding finish; and
- Subtle lighting will be provided at the skirting level for safety purposes.

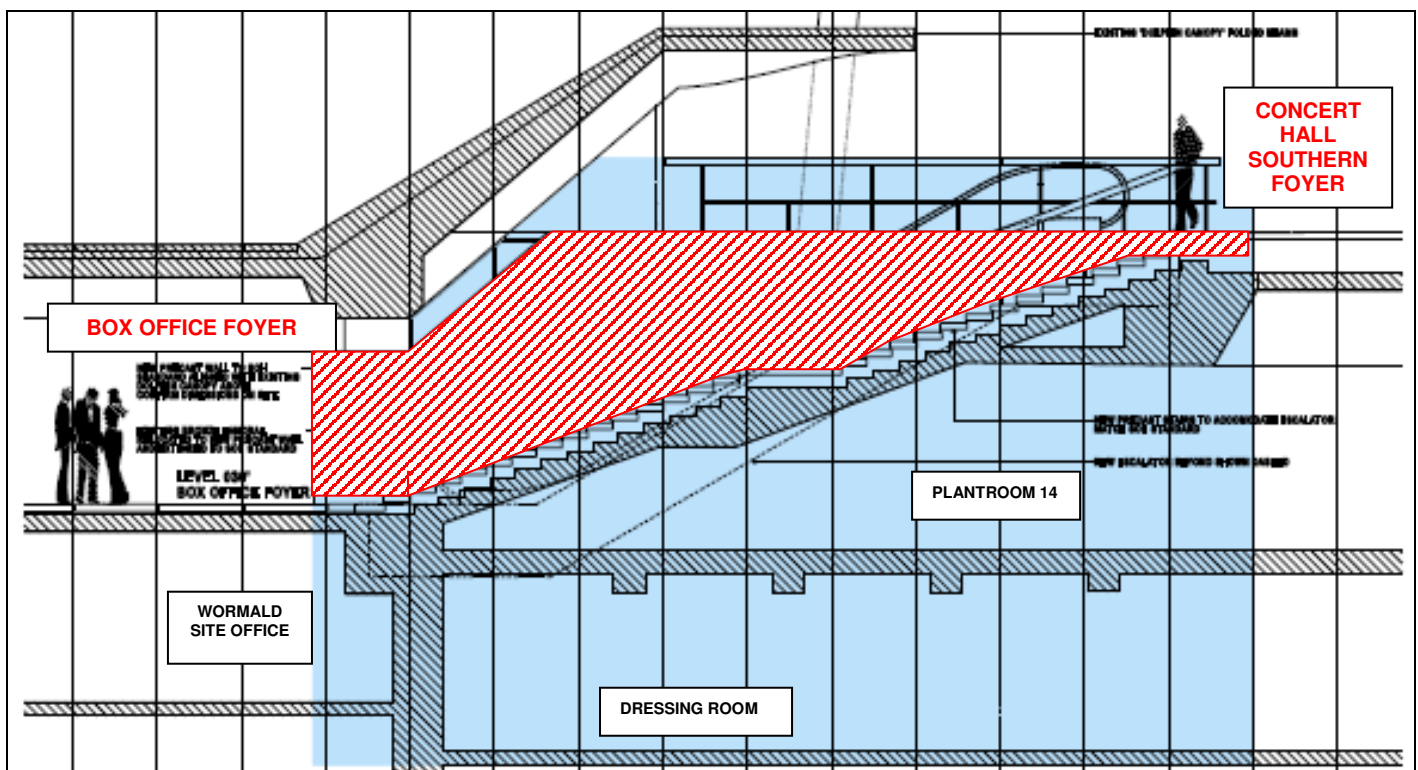



Figure 4: Cross-section of Concert Hall Stairs

 *Extent of new wall to separate escalators from stairs.*

As a result of the installation of the escalators and the subsequent narrowing of the stairwells, it is proposed to modify the existing door niches from the Southern Foyers to the Podium. The proposed modification will compensate for the loss of egress width on the stairways, providing for a clearer opening width and improved egress.

There are 10 door niches on the Southern Foyer level which are to be altered. It is proposed to introduce 3 doors where there are presently 2 and to introduce 5 doors where there are presently 4. This modification will not increase the width of the egress door niches. Materials and door dimensions will match the existing materials and dimensions.



Figure 5: Existing Concert Hall stairs viewed from Box Office Foyer Level



Figure 6: Concert Hall stairs with proposed escalators viewed from Box Office Foyer Level



Figure 7: Existing Concert Hall stairs viewed from Southern Foyer Level



Figure 8: Concert Hall stairs with proposed escalators viewed from Southern Foyer Level

4. STATUTORY CONTEXT

4.1 MAJOR PROJECT DECLARATION

The project is a Major Project under *State Environmental Planning Policy (Major Projects) 2005* (MP SEPP) as all development on land identified on Map 1 to Schedule 3 – Part 1 (Sydney Opera House) – Clause 1 is identified as development to which Part 3A applies. This opinion was formed by the Director General as Delegate of the Minister for Planning on 20 November 2007.

4.2 PERMISSIBILITY

The site is zoned Parks and Community Places under the provisions of the LEP 2005. Section 45(2)(j) permits “*other land uses which the consent authority is satisfied are incidental or ancillary to land uses which may be lawfully carried out within the zone*”. In this case, the installation of escalators and consequential modifications to the egress doors at the Sydney Opera House is considered to be ancillary development to the existing land use on site for the Sydney Opera House. Therefore, the proposal is permissible with the Minister's approval.

4.3 MINISTER'S POWER TO APPROVE

The Department has exhibited the Environmental Assessment (EA) in accordance with Section 75H (3) of the *Environmental Planning and Assessment Act, 1979* (EP&A Act). The project is permissible and meets the requirements of the MP SEPP. Therefore, the Department has met its legal obligations and the Minister has the power to determine this project.

4.4 DIRECTOR-GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (DGRS)

On 6 December 2007, the Department issued DGR's for the project, providing key issues for the Proponent to address as follows:

- Statutory and Other Requirements including Management Plan for the Sydney Opera House;
- Design, Visual Impacts and Design Quality Principles;
- Heritage;
- Structural Engineers Report;
- Work Method Statement; and
- Storage/Disposal Strategy.

The DGRs are located at **Appendix A** of this report.

On 6 March 2008, the EA was lodged by the proponent and was considered to satisfactorily address the DGRs.

4.5 OBJECTS OF ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

The objects of any statute provide an overarching framework that informs the purpose and intent of the legislation and gives guidance to its operation. The Minister's consideration and determination of a project application under Part 3A must be informed by the relevant provisions of the EP&A Act, consistent with the backdrop of the objects of the EP&A Act.

The objects of the EP&A Act in Section 5 are as follows:

- (a) *To encourage:*
 - (i) *the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages*

- for the purpose of promoting the social and economic welfare of the community and a better environment,*
- (ii) the promotion and co-ordination of the orderly and economic use and development of land,*
 - (iii) the protection, provision and co-ordination of communication and utility services,*
 - (iv) the provision of land for public purposes,*
 - (v) the provision and co-ordination of community services and facilities,*
 - (vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and*
 - (vii) ecologically sustainable development, and*
 - (viii) the provision and maintenance of affordable housing.*
- (b) *To promote the sharing of the responsibility for environmental planning between the different levels of government in the State, and*
 - (c) *To provide increased opportunity for public involvement and participation in environmental planning and assessment.*

The Objects stipulated under Section 5 (a), (b) and (c) are significant factors informing the determination of the application. The project does not raise significant issues with regards to the objects listed in Section 5.

With respect to ESD, the EP&A Act adopts the definition in the *Protection of the Environment Administration Act, 1991* including the precautionary principle, the principle of inter-generational equity, the principle of conservation of biological diversity and ecological integrity, and the principle of improved valuation, pricing and incentive mechanisms.

The Department has considered the Objects of the EP&A Act, including ESD in the assessment of the project application.

4.6 ECOLOGICALLY SUSTAINABLE DEVELOPMENT PRINCIPLES

There are 5 accepted ESD principles:

- (a) *Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations (the integration principle);*
- (b) *If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation (the precautionary principle);*
- (c) *The principle of inter-generational equity - that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations (the inter-generational principle);*
- (d) *The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making (the biodiversity principle); and*
- (e) *Improved valuation, pricing and incentive mechanisms should be promoted (the valuation principle).*

The Department has considered the proposed development in relation to the ESD principles and has made the following conclusions:

- (a) **Integration Principle** - the social and economic benefits of the proposal are demonstrated in the documentation submitted for the assessment of this application. The Department's assessment has duly considered all issues raised by public authorities. The proposal as recommended for approval does not compromise a particular stakeholder or hinder the opportunities of others, and improves access within the Sydney Opera House.
- (b) **Precautionary Principle** – as the works are entirely internal to the Sydney Opera House, there are no perceived threats of serious or irreversible environmental damage as a result of the proposal.

- (c) **Inter-Generational Principle** – through the implementation of various conditions of approval and environmental and management practices currently employed on the site, the proposal will ensure the unique environment of the Sydney Opera House is protected for the benefit of future generations.
- (d) **Biodiversity Principle** – The site has no remaining vegetation. The site therefore does not contain any threatened or vulnerable species, populations, communities or significant habitats.
- (e) **Valuation Principle** – This principle is not directly relevant to the proposal which is a special land use.

4.7 DIRECTOR-GENERAL'S ENVIRONMENTAL ASSESSMENT REPORT

The Director General's Environmental Assessment Report to the Minister for the proposed project satisfied the relevant criteria under Section 75I of the EP&A Act, and Clause 8B of the *Environmental Planning and Assessment Regulation 2000*, as follows:

SECTION 75I(2) CRITERIA	RESPONSE
(a) Copy of the proponent's environmental assessment and any preferred project report;	The Proponent's EA is included in Appendix C .
(b) Any advice provided by public authorities on the project;	All advice provided by public authorities on the project for the Minister's consideration is set out and discussed in Section 6 of this Report.
(c) Copy of any report of a panel constituted under Section 75G in respect of the project;	No statutory independent hearing and assessment panel was undertaken in respect of this project.
(d) Copy of or reference to the provisions of any State Environmental Planning Policy that substantially govern the carrying out of the project;	Refer to Section 4 of this Report.
(e) Except in the case of a critical infrastructure project – a copy of or reference to the provisions of any environmental planning instrument that would (but for this Part) substantially govern the carrying out of the project and that have been taken into consideration in the environmental assessment of the project under this Division;	An assessment of the development relative to the prevailing environmental planning instrument is provided in Section 4 of this report
(f) Any environmental assessment undertaken by the Director General or other matter the Director General considers appropriate;	The environmental assessment of the project application is this report in its entirety.
(g) A statement relating to compliance with the environmental assessment requirements under this Division with respect to the project.	The proponent's EA is considered to have satisfied the DGR requirements (Appendix A). Refer also to Section 7.
CLAUSE 8B MATTERS FOR CONSIDERATION	RESPONSE
(a) An assessment of the environmental impact of the project.	An assessment of environmental impacts of the project is found in Section 5 of this report.
(b) Any aspect of the public interest that the Director-General considers relevant to the project.	The proposal is considered to be in the public interest and is discussed in Section 5.5 of this report. The proposal will allow the Proponent to provide improved public access within the Sydney Opera House, by way of escalators which do not detract from the heritage attributes of the site.
(c) The suitability of the site for the project.	A description of the site and its suitability for the project is included in Section 2 of this Report. The site is suitable for the proposal.
(d) Copies of submissions received by the Director-General in connection with public consultation under Section 75H or a summary of the issues raised in those submissions.	The Department received a total of 5 submissions from public authorities, and no public submissions during the 30-day Exhibition Period.

4.8 ENVIRONMENTAL PLANNING INSTRUMENTS (EPI'S)

4.8.1 APPLICATION OF EPI'S TO PART 3A PROJECTS

To satisfy the requirements of Section 75I (2) (d) and (e) of the EP&A Act, this report includes references to the provisions of the environmental planning instruments that govern the carrying out of the project and have been taken into consideration in the environmental assessment of the project.

The primary controls guiding the assessment of the proposal are:

- *Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005*;
- *The Sydney Harbour Foreshores Area Development Control Plan*;
- *Environment Protection and Biodiversity Conservation Act 1999*; and
- *The Heritage Act 1977*.

Other controls to be considered in the assessment of the proposal are:

- *Management Plan for the Sydney Opera House (2005)*;
- *Utzon Design Principles (2002)*; and
- *Sydney Opera House: A Revised Plan for the Conservation of the Sydney Opera House and its Site (3rd edition 2003)*.

The provisions, including development standards of Local Environmental Plans, and Development Control Plans are not required to be strictly applied in the assessment and determination of major projects under Part 3A of the EP&A Act. Notwithstanding, these standards and provisions are relevant considerations as the DGRs require the proponent to address such standards and provisions.

Accordingly, the objectives and development standards of a number of EPIs and other plans and policies that substantially govern the carrying out of the project are appropriate for consideration in this assessment below.

4.9 COMPLIANCE WITH PRIMARY CONTROLS

4.9.1 SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005

SREP 2005 covers the area of Sydney Harbour and its catchment, including the site of the Sydney Opera House. SREP 2005 establishes planning principles and controls for the management of the Sydney Harbour catchment as a whole. Under the Plan, the site of the Sydney Opera House is a Heritage item within the Foreshores and Waterways Area of the Sydney Harbour Catchment and the 'City Foreshore Area' designated as a Strategic Foreshore Site.

Part 3, Division 2 of SREP 2005 lists a number of matters to be considered by the consent authority when making a development assessment decision, including:

- Biodiversity, ecology and environment protection;
- Public access to, and use of, foreshore and waterways;
- Maintenance of a working harbour;
- Interrelationship of waterway and foreshore uses;
- Foreshore and waterways scenic quality; and
- Maintenance, protection and enhancement of views.

Where relevant, the above matters have been considered and addressed in the Department's consideration of the proposed application, and do not raise any matters of concern. The proposal is consistent with SREP 2005.

4.9.2 THE SYDNEY HARBOUR FORESHORES AREA DEVELOPMENT CONTROL PLAN 2006 (DCP 2006)

Section 5 of DCP 2006 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 DCP 2006.

4.9.3 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999 (EPBC ACT)

The site of the Sydney Opera House is listed on both the World Heritage List and National Heritage List under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Actions that significantly affect world or national heritage listed sites require approval under the EPBC Act.

However, the Sydney Opera House is the subject of a Bilateral Agreement entered into between the Australian and NSW Governments in August 2005, pursuant to Section 45 of the EPBC Act. Under the terms of this agreement, the assessment regimes under the EP&A Act are 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*.

Therefore any approval under the provisions of the EPBC Act would be satisfied by approval under Part 3A of the EP&A Act, provided that the proposal is compliant with the *Management Plan for the Sydney Opera House* (Management Plan 2005). In this case, as the application is consistent with the Management Plan 2005 as discussed in Section 4.6.2 of this Report, no separate assessment under the EPBC Act is required.

4.9.4 THE HERITAGE ACT 1977

Section 75U of the *Environmental Planning and Assessment Act 1979* (EP&A Act) states that an approval under Part 4 of the *Heritage Act 1977* is not required for approved projects under Part 3A. However, in the case of the Sydney Opera House site, both statutory approvals under Part 3A of the EP&A Act and Part 4 of the *Heritage Act 1977* are required.

This is a result of the *Management Plan for the Sydney Opera House (2005)* (Management Plan), which is in force under Section 288 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regs). The Management Plan states that any proposed development on the Sydney Opera House site, assessed under Part 3A of the EP&A Act, will also require approval under Part 4 of the *Heritage Act 1977*. This approval is granted by the Heritage Office and is sought after the Minister's approval under Part 3A of the *EP&A Act*.

The Heritage Impact Statement, prepared by Design 5 Architects, assesses the proposal with regard to heritage considerations. The proposal will have no detrimental impact upon the heritage significance of the Sydney Opera House.

4.9.5 CITY OF SYDNEY LOCAL ENVIRONMENTAL PLAN 2005

The proposed development is permissible under the City of Sydney Local Environmental Plan 2005.

4.10 OTHER PLANS AND POLICIES

The Proposal has been considered against the following non-statutory documents:

4.10.1 MANAGEMENT PLAN FOR THE SYDNEY OPERA HOUSE (2005) (MANAGEMENT PLAN 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 provide the policies that are to protect and conserve the National and World heritage values of the site, but rather relies on 2 additional documents which are appendices 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) (CMP 2003); and*
- *Utzon Design Principles (2002)*

The proposal demonstrates consistency with the Management Plan 2005 as follows:

4.10.2 REVISED PLAN FOR THE CONSERVATION OF THE SYDNEY OPERA HOUSE AND ITS SITE (CMP 2003).

The *Revised Plan for the Conservation of the Sydney Opera House and its Site* (also described as the Conservation Management Plan under the Management Plan), prepared by James Semple Kerr and dated 2003, 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 and the Statement of Heritage Impact identify 5 policies in the CMP 2003 of relevance to the proposed development, these being Policy 1.1, 1.4, 1.5, 17.1 and 18.1. Each of these documents (in particular the Statement of Heritage Impact) discusses the proposal's consistency with the Revised Conservation Plan policies.

Where relevant, these policies have been considered and addressed in the Department's consideration of the proposed modification, and do not raise any matters of concern. These matters are addressed in further detail in Appendix B of this Report.

4.10.3 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. The Utzon Design principles of relevance to the proposal include:

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

Utzon has recommended that escalator access between the Box Office Foyer and the Southern Foyers of the Concert Hall and Opera Theatre can be provided, within the following guidelines:

- Locating the escalators on the outer edge of visual focus (eastern side for Opera Theatre and western side for Concert Hall) so as not to obstruct the visual experience of arrival up the stairs from the vehicular concourse through the Box Office to the Southern Foyers;
- The different geometry of the escalator and stairs should be separated and contained with the use of a new precast wall matching the existing side walls;
- Relating the wall to the geometry of the canopy above but not touching it; and
- Retention of existing handrails.

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 guidelines.

5. ASSESSMENT OF ENVIRONMENTAL IMPACTS

The key issues considered in the Department's assessment (as indicated in the DGRs) of the EA include the following:

- Heritage Impacts;
- Views and Visual Impacts;
- Accessibility;
- Construction Impacts; and
- The Public Interest.

5.1 HERITAGE

The Statement of Heritage Impact (HIS) prepared by Design 5 Architects and dated September 2007, provides a comprehensive assessment of the proposed development and its impact on the heritage significance of the Sydney Opera House arising from its position on various World, National, State and Local Heritage lists.

The HIS finds that the various listings identify primarily the same values for the place and that the management of those values is comprehensively addressed through 2 principle documents – the Utzon Design Principles and CMP 2003. The report finds that the proposal is fully compliant with these documents.

However despite compliance with the relevant Utzon Design Principles and the CMP 2003, it is considered that the proposal will have some level of impact on the arrival experience and on the significant spaces within the Sydney Opera House, including:

- A narrowing of the stair widths, however as these are already very generous and the proposed blade wall will permit the easy interpretation of the original size of the opening, the extent of the impact is considered acceptable; and
- 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.

The HIS makes a number of recommendations regarding finishes, detailing and lighting and it is proposed to adopt all of the recommendations outlined in that report. It should be noted that the report suggests that the width of the escalator treads should be maximised. The BCA and relevant Australian Standards restrict the tread width of such escalators to 1000mm. The proposal therefore already reflects the maximum allowable width.

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.

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

The NSW Heritage Office has been closely involved in the preparation of this proposal. On 18 June 2007, the proposal was presented to representatives of the Heritage Office, who also attended the viewing of the full size mock up of the escalator wall on 5 October 2007. On 1 August 2007, a pre-

DA briefing was provided to representatives of the Heritage Office. This close involvement by the NSW Heritage Office has ensured that any heritage issues associated with the proposed escalators have been identified at the earliest possible stage of the project.

The Department therefore considers that the heritage impacts of the proposal are minor and acceptable given these are more than balanced by the significant improvements to accessibility to the site for the elderly or those with an ambulant disability.

5.2 VIEWS AND VISUAL IMPACT

The site of the Sydney Opera House is highly visible from Sydney Harbour and the visual impact of the proposal is one of the key assessment considerations.

External

The proposal primarily relates to internal works, therefore external loss of views and external visual impact is not a significant issue. Given the building's World Heritage Listed status, an assessment of the internal and external visual impact of the proposal is warranted.

The proposed alterations to the egress doors to the podium are the only changes visible from outside the building. As there is no change to the overall size of the door niches and the Proponent confirms that the detailing and materials will match the existing materials, the alterations are unlikely to be discernible and are of such a minor nature they will not affect the existing visual comprehension of the building.

The alterations to the egress doors to accommodate an additional door opening per set is considered an acceptable impact, as the result will be freer and more open access between the Southern Foyers and the Podium.

Internal

The existing full-width stairs possess a strong, uncluttered clarity, with clear delineation between the floor, walls and ceiling of the space – each with a singular configuration and treatment. For both staircases the uncluttered nature of each element adds to the drama of the transition between the relatively dark, low ceiling space of the Vehicle Concourse and Box Office Levels and the lofty and light Southern Foyers. This is an essential component in the arrival experience to both the Concert Hall and Opera Theatre, as identified in the CMP 2003 and the Utzon Design Principles.

The major aesthetic impacts of the proposal will be as follows:

- *Narrowing of the stair widths;*

It is important that the narrowing of the stair spaces does not prevent the overall original width of the opening from reading as the dominant element. Although the escalators will result in a reduction in the width of both stair spaces by approximately 3 metres, it is considered that the generosity of each space is maintained, with the Opera Theatre and Concert Hall Stairs reduced to 5.5 metres and 7.5 metres respectively.

On 5 October 2007, a mock up of a full size model of the wall was carried out on-site. The mock-up confirmed that, due to the modest height of the blade wall, the reading of the full width opening as the dominant element is respected. Placement of the escalator away from the main visual axis from the Box Office level Podium entry and from the concourse stairs greatly assists in this regard.

This ensures that the reading of the original full width of the opening is preserved as the dominant element in the visitor arrival experience. The impact of this small reduction in width is therefore assessed to be acceptable.

- *Visual disparity between the width of the canopy and the reduced width of the stairs.*

The relationship between the generosity of the stairs space and the width of the canopy is an important quality of the existing stairs. Whilst it is inevitable that the proposal will compromise both of these elements to some extent, the relationship between these elements must be respected when considering the impact of insertion of an escalator within each stair well. With the reduced width of the stairs against the full width of the canopy, it is the relationship between these elements which suffers the greatest impact.

Utzon recommended that any new escalators connecting the Box Office Level and Southern Foyer Level should be located to the East (Opera Theatre) and West (Concert Hall) sides of the stairs, so as to not obstruct the visual aspect of a visitor's arrival experience up the stairs from the Vehicle Concourse Level of the Sydney Opera House. By the placement of the escalators away from the main visual axis from the Vehicle Concourse stairs, this will successfully reduce the visual impact of the escalators and does not draw unnecessary attention to the disparity between stair and canopy widths.

In addition, the disparity will be less distracting on entry than it will be on exit, where the intrusive effect of the wall is more obvious. This is considered a justifiable and valid impact, as it is the entry sequence which is considered the most important and dramatic of the visitor's experience.

- *Increased 'clutter' to stair spaces;*

The proposed escalators will impact on the strong, uncluttered clarity of the existing stair spaces, through the addition of a different element on the side of each stairwell, hence increasing the "clutter" of these spaces. This will have some impact on the symmetry and singularity of each staircase, particularly in relation to what will become an asymmetrically aligned concrete canopy above.

However, this is considered to be a minor impact, given consideration of the accessibility benefits of this proposal. In addition, the escalators are proposed in the least visible location when viewed from the Vehicle Concourse entrance in order to reduce any impacts of this increased 'clutter'.

- *Separation Walls will partially obscure views of the folded beam canopy;*

Utzon recommended that the differing geometry of the escalators and stairs should be separated and contained with the use of a new precast wall matching the existing side walls. This is therefore proposed as a component of installation of the escalators. However, it is noted that these walls will result in partially obscuring a portion of the folded beam canopy.

The full size site mock-up provided some clarity of this issue, illustrating that the amount of canopy obscured by the wall will not be substantial enough to cause concern. This effect has also been reduced by ensuring that the separation walls do not extend beyond the Southern Foyers finished floor levels, in order to maintain these important existing sightlines. In addition, the separation wall will consist of precast modular panels to match the existing geometry and finish of the precast stairway walls. This will further reduce the visual impact of the Separation Wall.

- *Escalators do not rise at the same angle as the existing stairs.*

The CMP 2003 suggests that the most effective and least disruptive way to improve access to the Southern Foyers would be an escalator that rises at the same rake as the existing stairs. This would be made possible by landings built into the continuous traverse of the escalator. However, the Proponent has advised that these 'landing' type escalators as described in the CMP 2003, which allow carriage of wheelchairs, are not available in Australia at this time. This is discussed in more detail in Section 5.3.

The current proposal therefore involves a single escalator flight that does not rise at the same angle as the existing stairs. The rake of the escalator will be the industry standard of 30 degrees, whereas the existing staircases have a rake of 19.7 degrees, separated by the 1.46 metre long mid-landing. This slight difference in rake will be minimally discernible, and any impacts will be further minimised by the proposed separation wall.

It is therefore considered that the current proposal complies with the CMP 2003.

Conclusion

The proposed escalators, associated separation wall, hand rails and lighting have been carefully designed to be in harmony with the existing stairway fabric and spaces. To ensure that the new escalators do not visually dominate the existing stairs and foyer spaces, wherever possible materials have been selected to match the existing materials.

However, the escalator will introduce some metal and glass to this space. Therefore, where it is not possible to match materials like for like, materials with a receding finish have been selected to respect the original dramatic architectural and structural features. For safety reasons, lighting will be subtly provided at skirting level.

Jørn Utzon has given consideration to the proposal and has also been involved in the preparation of the architectural plans, as the proposed development has been designed by both Utzon Architects and Johnson Pilton Walker Architects in Collaboration.

In addition, the NSW Heritage Office has been closely involved in the preparation of this proposal, and has attended a viewing of the full size mock up of the escalator wall as well as a pre-DA briefing. This close involvement has ensured that any visual impacts associated with the proposed escalators have been identified and minimised at the earliest possible stage of the project.

The Department is satisfied that the visual impacts of the proposed development have been appropriately minimised by way of the design elements incorporated into the proposal. These elements will ensure that the proposed escalators do not detract from the quality of the overall design of the Sydney Opera House.

On this basis, the impact is considered acceptable in view of what is achieved in terms of improved accessibility for the patron and visitor to the Sydney Opera House.

5.3 ACCESSIBILITY

The federal Department of Environment, Water, Heritage and the Arts (DEWHA) and the CEO of City of Sydney Council each raised an issue with the decision to provide standard escalators instead of wheelchair accessible escalators.

The possibility of escalators suitable for wheelchairs was considered, however the Proponent advises that no supplier is located within Australia. The Proponent has also advised that there would be operational and efficiency difficulties caused by the time taken for such escalators to reconfigure between conventional and wheelchair capable modes. In addition, there are cumulative safety concerns, legislative constraints and servicing difficulties which currently prohibit the installation of wheelchair accessible escalators.

Discussions with several large Australian-based lift and escalator firms about accessible escalators confirms that no suppliers located in Australia manufacture these types of escalators due to feasibility difficulties associated with escalators designed to accommodate escalators, as well as limited market demand. As such it is proposed to provide standard escalators to both sets of stairs.

The works will be such that should one of these escalators become available in the future, its installation in this position will still be possible.

Wheelchair access within the Sydney Opera House has been improved with the new Bennelong Lift from the vehicle concourse to the Box Office Foyer, and as a result patrons requiring disabled access will no longer need to be escorted from Stage Door and the back of house Central Passage from the Vehicular Concourse level. However, access for wheelchair users and prams from the Box Office Foyer to the Southern Foyers will continue to be via back of house lifts, escorted by staff from the Information Desk in the Box Office Foyer via the Green Room.

The Department considers that the proposal is acceptable, as the net effect of installation of the standard escalators will have a significant impact on the broader considerations for facilitating accessibility and will substantially improve access for the increasingly elderly demographic of Sydney Opera House patrons as well as any patrons with an ambulant disability.

5.4 CONSTRUCTION IMPACTS

The Work Method Statement, prepared by John Holland Group, provides a description of how the works will be carried out:

- It is proposed to crane the escalators onto the western Southern Foyer Level concourse, with the crane located outside the new loading dock;
- A framing system will be installed to facilitate the lowering of the escalators into position;
- Forklifts at the Box Office and Southern Foyer Levels will lower the escalators into place, utilising the frame to suspend the escalators underneath the dolphin canopy, whilst pulling the escalators down towards the Box Office;
- The escalators will then be moved into the Opera Theatre and Concert Hall Southern Foyers respectively, through the Southern glazed bronze doors;
- The Southern glazed bronze doors and adjacent side viewing panel will need to be removed to facilitate the installation, as well as to facilitate access into the foyers;
- Internally, the handrails to the foyers and food and beverage bars will also need to be removed; and
- Upon completion of each escalator installation, the handrails, catering bars, doors and side viewing panel will be reinstated.

Measures to minimise impacts of these construction works include:

- (1) Erection of a hoarding to close off the work areas, in order to ensure the protection of the surrounding heritage fabric;
- (2) Creation of a pedestrian corridor on the opposite side of the stairs to where the escalator works are being carried out. This will allow the patrons of the Sydney Opera House to gain access to the Southern Foyers Level;
- (3) During construction work, plywood will be placed on the existing pre-cast floor panels and door frames to ensure that no damage is incurred. At the completion of each work session, the plywood protection will be removed and stored for the next work session.
- (4) There is very little historic material to be removed, however it is an established practice at the site, that all removed material which is in sound condition is generally retained and stored for possible re-installation at a later date. With regard to the granite step units to be removed, these components may be used in repairs in other areas, or used in the new work.

The proposed measures will ensure that the potential construction impacts of the proposal are satisfactorily managed, and will be incorporated as conditions of approval to ensure they are fully implemented.

The Proponent has requested that they be permitted to carry out overnight works, as this will result in the minimum amount of impact on the ongoing operation of the Sydney Opera House. This is considered to be acceptable, as the proposed works are internal to the building and previous consents relating to internal works in the Sydney Opera House building, under Part 4 of the EP&A Act, have permitted works to be carried out at any time during a 24 hour period, on any day of the week. The previous consents have required that these works do not unreasonably impact on the amenity of the patrons of the Sydney Opera House or surrounding residents and have also required trial periods for the 24-hour works.

Therefore, 2 conditions will be incorporated into the recommended Instrument of Approval, permitting 24-hour works for a trial period of 6 months, after which time the Proponent will be required to obtain written approval from the Department that the extended hours can continue beyond this initial 6-month period. The Proponent will also be required to address any complaints received during this 6-month period, as well as any potential impacts the 24-hour works period may have on the amenity of the patrons of the Sydney Opera House.

Given the location of the site and the above measures, the Department considers that construction impacts have been adequately addressed and that the proposal represents an acceptable approach to waste management.

5.5 THE PUBLIC INTEREST

The proposal is considered to be in the public interest for the following reasons:

- The heritage significance of the Sydney Opera House is retained as part of the proposal;
- The design approach is innovative both in terms of aesthetics and achievement of improved accessibility to the southern foyers of the Opera Theatre and Concert Halls; and
- The construction management procedures will ensure minimal environmental impact and disruption to the functioning of the Sydney Opera House.

6. CONSULTATION AND ISSUES RAISED

6.1 PUBLIC EXHIBITION DETAILS

The Major Project was exhibited for 30 days from 2 April 2008 until 2 May 2008 and was published in the Sydney Morning Herald and The Australian newspapers. The EA was made available to the public in the Department's Information Centre and at the offices of City of Sydney Council.

6.2 SUBMISSIONS RECEIVED ON ENVIRONMENTAL ASSESSMENT

The Department received a total of 5 submissions from public authorities being 2 submissions from City of Sydney Council, and single submissions from NSW Heritage, the Sydney Harbour Foreshore Authority (SHFA) and the Federal Department of Environment, Water, Heritage and the Arts (DEWHA).

Of these submissions, DEWHA and the City of Sydney Council raised one issue of concern whilst the remaining agency submissions did not raise any objection.

6.3 PUBLIC SUBMISSIONS

No public submissions were received during the 30-day exhibition period.

6.4 SUBMISSIONS FROM PUBLIC AUTHORITIES

The following submissions were received from public authorities:

6.4.1 NSW HERITAGE

The NSW Heritage Office advised by letter dated 6 May 2008 that they had no objection to the proposal described in the EA. The Heritage Office acknowledges that although the proposal will have some negative impacts on some interior spaces of the Sydney Opera House, the impacts on the overall State, National and World Heritage values are acceptable.

The Heritage Office has also requested that the recommendations listed on Page 9 and 10 of the Heritage Impact Statement (HIS) prepared by Design 5 Architects and dated 29 February 2008, be incorporated into the Instrument of Approval. The recommended Instrument of Approval includes a condition to require that the proposal be undertaken in accordance with the HIS.

6.4.2 CITY OF SYDNEY COUNCIL

City of Sydney Council advised by letter dated 7 May 2008 that they had no objection to the proposal described in the EA.

The CEO of the City of Sydney Council made a separate submission dated 8 May 2008, in which an issue was raised with the decision to install standard escalators instead of wheelchair-accessible escalators.

Response

As discussed in Section 5.3 of this Report, the possibility of wheelchair-accessible escalators suitable was investigated, however the Proponent has advised that no supplier is located within Australia. Discussions between several large Australian-based lift and escalator firms and the City of Sydney Council's Senior Building Surveyor has confirmed this statement. It appears that this is a result of feasibility difficulties associated with escalators designed to accommodate wheelchairs, as well as limited market demand.

As such it is proposed to provide standard escalators to both sets of stairs. The Proponent has advised that if such an escalator becomes available in the future, the replacement of the proposed escalators will be possible.

The Department considers that the proposal is acceptable, as the standard escalators will still have a significant impact on the broader considerations for facilitating accessibility, particularly to serve the increasingly elderly demographic of Sydney Opera House patrons as well as any patrons with an ambulant disability.

6.4.3 DEPARTMENT OF ENVIRONMENT, WATER, HERITAGE AND THE ARTS (DEWHA)

The federal Department of Environment, Water, Heritage and the Arts (DEWHA) has reviewed the proposal and raised only one issue. The document, *A Revised Plan for the Conservation of the Sydney Opera House and its Site* (CMP 2003), prepared by James Semple Kerr, suggests that the most effective and least damaging way to improve access to the Southern Foyers is an escalator that rises at the same angles as the existing stairs. Rising at the same angle as the stairs would be made possible by landings built into the continuous traverse of the escalator.

This suggestion differs from the current proposal, which includes a single escalator flight that does not rise at the same angle as the existing stairs.

Response

CMP 2003 discusses the need for improved accessibility largely in the context of the installation of escalators from the vehicle concourse to the box office foyer. This is the 'main' entrance to the building and is therefore the most important element in the visitor experience to the Sydney Opera House, alongside the approach via the exterior podium stairs.

CMP 2003 addresses the staircases to the Southern Foyers of the Opera Theatre and Concert Hall separately to these 'main' stairs, and recommends that the escalator arrangement that will cause the least disruption would be single 'landing' type escalator programmed to travel up or down as required.

The current proposal involves escalators which the Proponent advises will be set to travel up or down depending on when each setting is required. For example, prior to session commencement, the escalators will be set to ascend towards the Southern Foyers, and at session commencement, the escalators will be set to descend back down towards the Box Office Foyer. A similar set up will be utilised during intermission periods.

However, the 'Landing' type escalator described in the CMP 2003, which would allow carriage of wheelchairs, is not available in Australia at this time. This issue is discussed in Part 5.3 of this Report. The Proponent has advised that if such an escalator becomes available in the future, the replacement of the proposed escalators will be possible.

It is therefore considered that the current proposal complies with the CMP 2003 to the extent possible at this time.

6.4.4 SYDNEY HARBOUR FORESHORE AUTHORITY (SHFA)

SHFA advised by letter dated 5 May 2008 that they had no objection to the proposal described in the EA.

7. CONCLUSION

The Department has assessed the EA and considered the submissions in response to the proposal. The key issues raised in submissions and in the assessment related to views and visual impacts, heritage, accessibility, and construction impacts.

The Department considers these issues to have been satisfactorily addressed, and a number of conditions are recommended to ensure minimal impacts as a result of the proposal.

The proposed development will allow for improved access from the Box Office Level to the Southern Foyers of the Opera Theatre and Concert Halls. Furthermore, the proposal has complied with the environmental assessment requirements, and complies with the relevant environmental planning instruments for the Sydney Opera House site.

On these grounds, the Department considers the site to be suitable for the proposed development and that the project is in the public interest. All relevant impacts on the National and World Heritage values of the Sydney Opera House that the development has, will have or is likely to have, have been considered, and deemed to be satisfactory.

Consequently, the Department recommends that the project be approved, subject to the conditions of approval.

8. RECOMMENDATION

It is recommended that the Minister:

- (A) **Consider** the findings and recommendations of this Report; and
- (B) **Approve** the carrying out of the project, under Section 75J of the *Environmental Planning and Assessment Act, 1979*; subject to conditions; and **Sign** the Determination of the Major Project (**Tag A**).

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APPENDIX A – DIRECTOR-GENERAL'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (DGR's)

Attachment 1

Director-General's Environmental Assessment Requirements

Section 75F of the *Environmental Planning and Assessment Act, 1979*

Application No.	MP 07_0142
Project	Proposed installation of escalators between the Box Office and Southern Foyers and modifications to egress doors
Location	Sydney Opera House, Bennelong Point
Proponent	Sydney Opera House Trust
Date issued	6 December 2007
Expiry date	Two (2) years from the date of issue
General requirements	<p>The Environmental Assessment for the Project Application must include:</p> <ul style="list-style-type: none"> a) An executive summary; b) A detailed description of the project, including:- <ul style="list-style-type: none"> i. Any development options; ii. Justification for the project taking into consideration any environmental impacts of the project, the suitability of the site and whether the project is in the public interest; iii. Outline of the implementation of the project. c) A thorough site analysis and description of existing environment; d) Consideration of all relevant statutory and non-statutory provisions, in particular relevant provisions arising from environmental planning instruments, Draft Regional Strategies and Development Control Plans (including justification any non-compliances) as well as impacts, if any, on matters of national environmental significance under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>; e) Where relevant, demonstrate compliance with BCA and relevant Australian Standards; f) An assessment of the potential impacts of the project; g) An assessment of the key issues specified below and a table outlining how these key issues have been addressed; h) A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading; and i) The plans and documents outlined in Attachment 2.
Key issues	<p>The Environmental Assessment must address the following key issues:</p> <p>1. Statutory and Other Requirements</p> <p>All relevant legislation and planning provisions applying to the site; and an assessment and justification for any non-compliance.</p> <ul style="list-style-type: none"> a) Sydney Regional Environmental Plan (Sydney Harbour Catchment)

	<p>2005;</p> <ul style="list-style-type: none">b) State Environmental Planning Policy (Major Projects) 2005;c) The Sydney Harbour Foreshores Area Development Control Plan;d) Environment Protection and Biodiversity Conservation Act 1999; ande) The Heritage Act 1977. <p>2. Design, Visual Impacts and Design Quality Principles</p> <p>Address the visual appearance and impact of the project on the existing Opera House fabric/built form and its setting. Visual aids such as photomontage must be used to demonstrate visual impacts.</p> <p>3. Heritage</p> <p>The EA must include a Heritage Impact Statement prepared by a suitably qualified person and addressing matters including:</p> <ul style="list-style-type: none">a) Details of the proposed installation of escalators and assessment of impact of the proposed works on the heritage significance of Sydney Opera House in general and in particular the spaces in which the works are being carried out. This assessment of impact must specifically relate to its heritage significance at State and National levels and World Heritage values;b) Measures undertaken to minimise and mitigate potential heritage impacts;c) Any demolition or removal of fabric and, where proposed, an assessment of the level of significance and physical condition of any fabric proposed to be removed;d) Justification for the removal of any intrusive fabric and consideration of any alternate reuse options for such fabric;e) Information on the access issues involved and the process followed in arriving at the preferred solution in case of escalators as well as the modifications to the egress doors. All alternative solutions considered must also be documented along with the reasons for not adopting them;f) Information on any flow-on works that may be required as a result of closure of the subject area for example any temporary structures required to accommodate activities displaced during the construction period;g) Demonstration (if applicable) of adherence to the principles, processes and practices of the Burra Charter (Australia ICOMOS);h) Demonstration (if applicable) of consideration of advice contained in <i>Statements of Heritage Impact</i> published by the Heritage Office; andi) Demonstration of compliance with Sydney Opera House Conservation Plan dated 23 June 2003. <p>4. Management Plan for the Sydney Opera House.</p> <p>Demonstrate compliance with all relevant provisions.</p> <p>5. Structural Engineers Report</p> <p>A Structural Engineers Report must be submitted on the likely impacts of the</p>
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	<p>proposed escalators on the structural integrity of the Sydney Opera House and confirming the viability of the proposed escalators.</p> <p>6. Work Method Statement</p> <p>A Work Method Statement must be submitted, explaining the delivery and installation of the proposed escalators while ensuring protection of the surrounding heritage fabric. If any temporary openings are required to deliver the escalator parts to the location, details of the opening and the likely impact of these openings on the heritage significance of the Sydney Opera House must also be included in the application as proposed works and Heritage Impact Statement.</p> <p>7. Storage/Disposal Strategy</p> <p>If historic fabric is to be demolished or removed, a Storage/Disposal Strategy is required, outlining preferred option and possible alternatives.</p>
Consultation	<p>You should undertake an appropriate and justified level of consultation, having regard to previous consultation, with utilities suppliers and the relevant following parties during the preparation of the Environmental Assessment:</p> <p>Agencies or other authorities:</p> <ul style="list-style-type: none"> • City of Sydney Council; • Heritage Council of NSW; • Australian Heritage Council; • Sydney Harbour Foreshore Authority; and • Sydney Opera House Conservation Council. <p>The consultation process and the issues raised should be described in the Environmental Assessment.</p>
Deemed refusal period	60 days.

APPENDIX B – COMPLIANCE WITH OTHER CONTROLS

SYDNEY REGIONAL ENVIRONMENTAL PLAN (SYDNEY HARBOUR CATCHMENT) 2005

The following provisions are applicable under the SREP 2005:

Clause 13— Sydney Harbour Catchment Planning Principles

These principles include a wide range of principles concerned primarily with protecting the health of the harbour, most of which are relevant to this application. Other principles relate to the scenic qualities of the harbour and publicly accessible vantage points, as follows:

- (f) *development that is visible from the waterways or foreshores is to maintain, protect and enhance the unique visual qualities of Sydney Harbour,*
- (g) *the number of publicly accessible vantage points for viewing Sydney Harbour should be increased,*

The proposed alterations to the doorways are minor and will not impact on the Scenic qualities of the Harbour. The Southern Foyers are vantage point for viewing the harbour and the proposed escalators will increase accessibility to the area, consistent with these objectives.

Clause 14— Foreshores and Waterways Planning Principles

Relevant Principles are concerned with protecting and maintaining the visual qualities of the Harbour and Foreshores, as follows:

- (a) *development should protect, maintain and enhance the natural assets and unique environmental qualities of Sydney Harbour and its islands and foreshores,*
- (d) *development along the foreshore and waterways should maintain, protect and enhance the unique visual qualities of Sydney Harbour and its islands 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 5.

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.

Clause 15 — Heritage Conservation Planning Principles

Relevant Principles include:

- (a) *Sydney Harbour and its islands and foreshores should be recognised and protected as places of exceptional heritage significance,*
- (b) *the heritage significance of particular heritage items in and around Sydney Harbour should be recognised and conserved,*
- (c) *an appreciation of the role of Sydney Harbour in the history of Aboriginal and European settlement should be encouraged,*
- (d) *the natural, scenic, environmental and cultural qualities of the Foreshores and Waterways Area should be protected,*
- (e) *significant fabric, settings, relics and views associated with the heritage significance of heritage items should be conserved,*

Refer to discussion below in Section 5, 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).

Clause 53 — Heritage Objectives

The relevant objectives are:

- (1) *The objectives of this plan in relation to heritage are:*

- (b) *to conserve the heritage significance of existing significant fabric, relics, settings and views associated with the heritage significance of heritage items, and*
- (2) *The objectives of this plan in relation to the Sydney Opera House are:*
 - (a) *to establish a buffer zone around the Sydney Opera House so as to give added protection to its world heritage value, and*
 - (b) *to recognise that views and vistas between the Sydney Opera House and other public places within that zone contribute to its world heritage value.*

Refer to discussion below in Section 5. This demonstrates compliance with the objectives under this clause. The objectives relevant to the Sydney Opera House Buffer Zone are not relevant in this case as the proposed works are to take place solely within the Sydney Opera House itself and not the buffer zone.

Clause 55 — Protection of Heritage Items

Clause 55 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.

A Heritage Impact Statement, prepared by Design 5 Architects and dated February 2008, has been provided. Refer to discussion below in Section 5.

REVISED PLAN FOR THE CONSERVATION OF THE SYDNEY OPERA HOUSE AND ITS SITE (CMP 2003).

The following policies are applicable under the CMP 2003:

Policy 1.1: Carry out work within the framework of Utzon's design principles.

The proposal fully complies with the design principles. Refer to discussion under Section 4.6.3 below.

Policy 1.4: *Interiors designed by Hall should retain the character of the original design.*

The relevant interior spaces are Utzon spaces and therefore 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 has been combined with technical advances and design quality 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.

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 into the southern foyers of the Opera Theatre and Concert Hall is retained. In addition, the escalators are separated from the stairs by an appropriately designed wall (in alignment with Utzon's Guidelines) 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.*

The sequence of spaces as originally intended by Utzon 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 this is not considered to be a substantial issue. The existing stair widths are generous and the small reduction in width under the proposal is considered acceptable.