

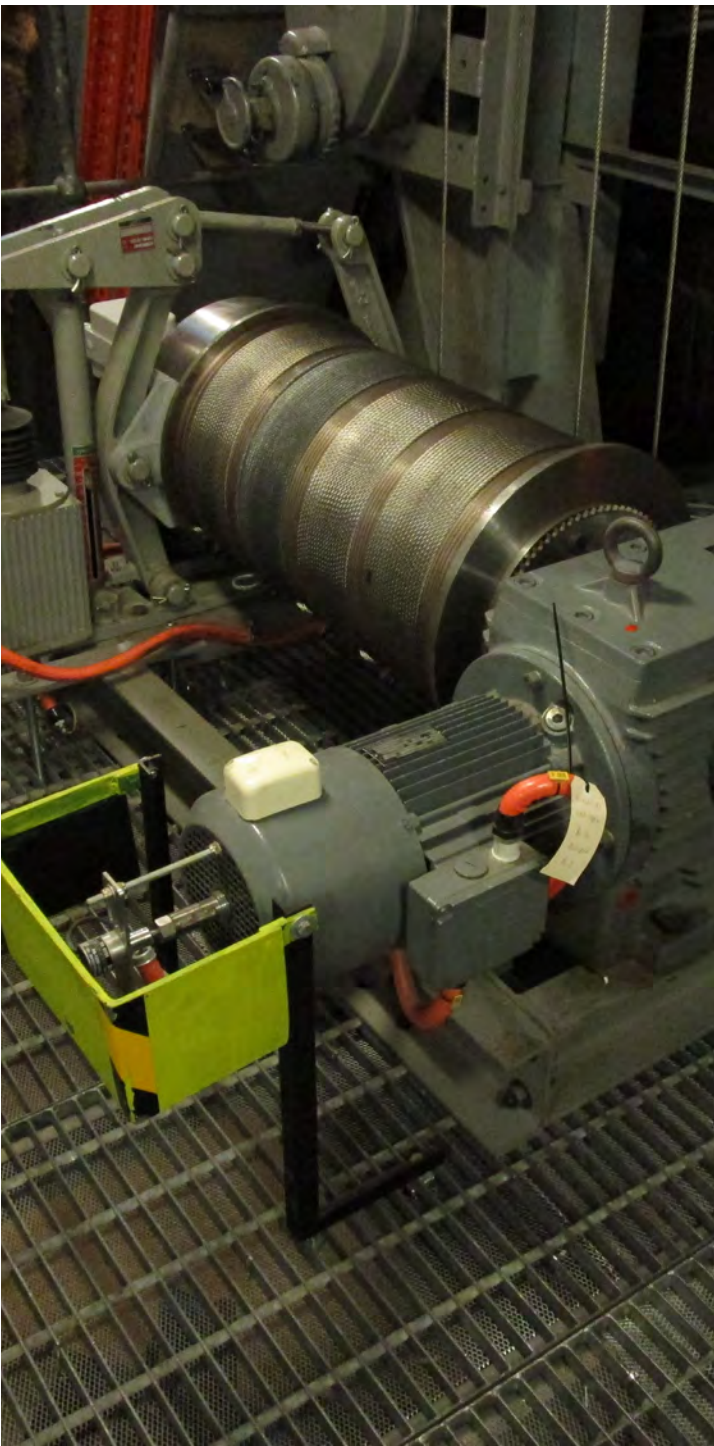
CONCERT HALL



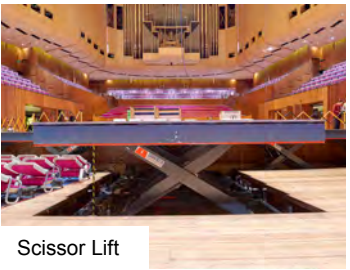


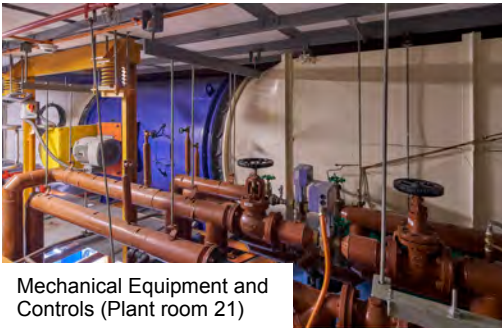


SIGNIFICANCE ASSESSMENT OF MECHANICAL EQUIPMENT AND THEATRE MACHINERY

Sydney Opera House is of the highest level of heritage significance and is listed at local, state, national and world heritage level. It is considered a masterpiece of 20th century architecture, engineering and construction, including its interiors, fittings and finishes. Most of the machinery dates from the original installation in the 1970s.

Assessment methodology

Mechanical equipment	Equipment has been assessed by members of Opera House staff with long term knowledge of the equipment, in close consultation with Alan Croker, Sydney Opera House’s heritage architect and Steensen Varming’s mechanical consultants.
Theatre Machinery	Machinery has been assessed by members of Opera House staff with long term knowledge and experience of this machinery, in consultation with Alan Croker, Sydney Opera House’s heritage architect. This assessment was then checked with representatives from Waagner Biro - the suppliers and installers of this machinery in the late 1960s / early 1970s.
Accoustic reflectors	Research was undertaken by Design 5 into archived documents, images and collections to determine the evolution, changes, and signicance of the acrylic accoustic reflectors.



EQUIPMENT	PHOTO ARCHIVE REFERENCE	ASSESSED SIGNIFICANCE	PROPOSED ACTION	IMAGES
PLANT ROOM 17				
Mechanical Equipment and Controls (Plant room 17)	NF-L2-12, 13, 14, 15, 18, 19	<p>Low significance.</p> <p>Air-conditioning plant in Plantroom 17 is an Air-Handling Unit, which comprises a fan, cooling coils, walls, pipework and controls.</p> <p>The fan is a Howden proprietary fan that is still commercially available, one of 55 similar units throughout the SOH.</p> <p>The walls are constructed of "Cliplok" galvanised metal sheeting and "Rockwool" insulation, which are common construction materials still available today.</p> <p>The cooling coils, pipework and controls have all been replaced in the last fifteen years.</p> <p>Some of the panels on the control units retain earlier components.</p>	<p>Due to the constricted nature of the location, some equipment will need to be broken down as the equipment would not be able to be extracted intact.</p> <p>The constituent materials will be recycled.</p>	 <p>Mechanical Equipment and Controls (Plant room 17)</p>
CONCERT HALL THEATRE MACHINERY				
Canon Port Air Supply Diffusers	CH-L5-15	<p>Moderate significance.</p> <p>Many units have been modified or replaced.</p> <p>Original/early units are to be identified when close access is available.</p>	<p>One (1) air supply diffuser (to be selected) to be archived as part of SOH collection. Selected piece to include from visible face to connection with duct work. Remainder to be removed.</p>	 <p>Canon Port Air Supply Diffuser</p>
Stage Extension - Scissor Lift	CH-SM-04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17	<p>Moderate significance.</p> <p>The stage extension was installed well after the Opera House was opened.</p> <p>The scissor lift mechanisms were supplied by Laweco Hebe Systeme in Germany - a specialised engineering firm that commenced operation in 1979.</p> <p>The lifting system is of very high quality but of a relatively conventional type, not unique to the Opera House.</p>	<p>Scissor lifts will be removed and disposed of to make way for proposed automated lifting system.</p>	 <p>Scissor Lift</p>
Sound Mixing Console Desk	CH-SM-18, 19, 20, 21, 22, 23	<p>Sound mixing console is recent.</p> <p>Not affected by this project.</p>	<p>Retained in use.</p>	 <p>Sound Mixing Console Desk</p>
Acrylic acoustic clouds	CH-AR-01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44	<p>Assessed as high significance.</p> <p>Research confirms the existing reflectors are 3rd generation (from 1994 and 2009).</p>	<p>Two (2) reflectors to be accessioned into SOH collection and archived.</p> <p>Remainder to be disposed of in a process to be determined.</p>	 <p>Acrylic Acoustic Clouds</p>
MECHANICAL EQUIPMENT AND MACHINERY ABOVE CONCERT HALL				
Mechanical Equipment and Controls (Plant room 21)	CR-PR-7, 8, 9, 10, 11, 12	<p>Low significance.</p> <p>Air-conditioning plant in Plantroom 21 is an Air-Handling Unit, which comprises a fan, cooling coils, walls, pipework and controls.</p> <p>The fan is a Howden proprietary fan that is still commercially available, one of 55 similar units throughout the SOH.</p> <p>The walls are constructed of "Cliplok" galvanised metal sheeting and "Rockwool" insulation, which are common construction materials still available today.</p> <p>The cooling coils, pipework and controls have all been replaced in the last fifteen years.</p> <p>Some of the panels on the control units retain earlier components.</p>	<p>Due to the constricted nature of the location, some equipment will need to be broken down as the equipment would not be able to be extracted intact.</p> <p>The constituent materials will be recycled.</p>	 <p>Mechanical Equipment and Controls (Plant room 21)</p>
Cloud Winches (for acrylic accoustic reflectors)	CR-WM-80, 81, 82, 83	<p>High significance.</p> <p>Most winches are original c1972, but all have had modifications.</p>	<p>Winches SCW3 and SCW4 will be archived as part of SOH collection.</p> <p>Remaining winches will be disposed of.</p>	 <p>Cloud Winches</p>
Heavy Duty Winches	CR-WM-101, 102, 109, 110, 111	<p>High significance.</p> <p>Most winches are original c1972, but all have had modifications.</p>	<p>Winches 16 and 18 will be archived as part of SOH collection.</p> <p>Remaining winches will be disposed of.</p>	 <p>Heavy Duty Winches</p>