South Australian Heritage Act 1978-82	Register of State Heritage Items ITEM EVALUATION SHEET Buildings and Structures	Ref. No. 6628-13757
	Item BRAGG LABORATORIES UNIVERSITY OF ADELAIDE ADELAIDE	Status
Age 1962	Subject Original and Present Use: 0507 Tertiary Educational Institution	Style INTERNATIONAL

		E	VG	AG	FP	NA
History	Context Exemplifies the "science boom" in Western countries which followed the realization in the late 1950's of the extent of Soviet technological achievements.		X			
	Person/Group Named to commemorate the centenary of the birth of Sir William H. Bragg.		X			
	Event No specific event					X
	Architect/Builder Architects: Hassell, McConnell & Partners. 1962 Builder: Peak		X			
Architecture	Design Lecture theatre linked to 4 storey laboratory block via open court. Designed in the idiom of the Miesian philosophy of "less is more". Featuring good quality fine detailing, modern materials and grid planning.	X				
	Construction Steel frame based on an 8 ft. grid with concrete brick and red brick walls, steel framed windows, RC slab floor, and sheet metal roofing.		X			
	Interior Interior features uncluttered open spaces with a large proportion of the wall area being glass. Crisp design solutions in the Miesian tradition.		X			
	Representation A rare example of this design philosophy successfully applied. Another example includes the Eagle Star Insurance building (c. 1967), Grenfell Street.		X			
Environment	Continuity A building that blends well with surrounding earlier buildings. A similar use of materials (eg. red brick to east and west walls) and similar scale.		X			
	Local Character Contributes to the character of the campus in representing a period of international architectural thought popular at that time.		X			
	Landmark Not a conspicuous landmark.				X	
Integrity	Alterations Substantially unaltered		X			
	Condition In good condition	X				
	Compatibility Is still used as laboratories and lecture theatre.	X				

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Supplementary Information

Adaptation: The building, set within a University campus could fulfil a variety of funcitons. However, in doing so, the structural expression should be retained, internal partioning discouraged and use of colour to the exterior should be discouraged.

Interpretation: Illustrates an important movement in 20th century international architectural thought.

History and Sources

The Bragg laboratories are of significance for three independent reasons:

1. as a notable local example of architectural trends of the International movement,

2. in commemoration of the contributions to Physics of Sir William Bragg, and

3. as a representative of the upsurge in research and teaching in the sciences after the late 1950's.

The historical context of the construction of the Bragg Laboratories was the "science boom" of the late 1950's and early 1960's, which arose from the Cold War rivalry between the Soviet Union and the United States. The western view of the Soviet Union's industrial and military capabilities had been tempered by conventional faith in Russia's scientific backwardness. This complacent belief was shattered by a series of convincing demonstrations of Soviet technological achievement, culminating in 1958 with the successful launching of the first artificial satellite, Sputnik I. In 1961 the first human cosmonaut, Yuri Gagarin, was placed in orbit.

These events caused shockwaves in the United States and its military allies, including Australia. One response was an immediate increase in government expenditure on research and education, and a shifting of priorities to "hard" technological subject areas such as mathematics and physics. The Bragg Laboratories are an example of this abrupt change of direction in tertiary education. However, it is also significant that the opportunity was taken to pay homage to the contribution to science of a much earlier Adelaide physicist.

William Henry Bragg was born in Britain on 2 July 1862. A physicist of immense importance, Bragg spent a considerable period of his early professional life in Adelaide in the capacity of Professor at Adelaide University. The Bragg Laboratories, at the University were constructed and opened in 1962 to commemorate the centenary of the birth of this respected scientist.

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History and Sources

W.H. Bragg arrived in Adelaide in 1886, a recent graduate from Trinity College, Cambridge. His interests as a student had focussed on mathematics and Newtonian subjects including statics, dynamics, optics, gravitation and astronomy. He was encouraged to apply for a position that had recently become vacant, the Elder Chair of Mathematics at the University of Adelaide. Bragg was appointed to the position, to be responsible for mathematics and environmental physics. He was 23 years old.

The University at this stage was in its formative period, with a small library and few staff. Bragg was responsible for teaching pure and applied mathematics and theoretical and practical physics to a range of students. He also examined secondary public school students and gave lectures to second year music students on the topic of acoustics. As his work at the University continued, Bragg's research interests broadened and slowly staff numbers and experimental facilities were increased. Bragg was principally interested during this period in the properties of X-rays and electromagnetic radiation. Isolated in South Australia, Bragg began to correspond with leading European scientists as his work and his reputation increased.

Soon after Bragg's arrival in Adelaide, he was introduced to the leading social and intellectual families. Charles Todd, the Post Master General of South Australia and instigator of the Overland Telegraph Line and his family were among the early contacts. Todd's daughter, Gwendoline was of particular interest to Bragg and the two married at St. Luke's, Whitmore Square in June 1889. After the marriage the couple lived in a rented house on Le Fevre Terrace, North Adelaide. Two sons were born during the period, William Lawrence on 31 March 1890 and Robert Charles on 26 November 1895. The family remained at this address until 1898, and moved due to a 12 month period of study leave overseas.

Upon their return, a block of land was purchased on the corner of East Terrace and Carrington Street. A house was designed by W.H. Bragg and the foundation stone laid on 9 September 1899. Named "Catherwood House" the property is now the Public Schools Club.

Bragg's work continued at the University with the trigger for independant research occurring in 1903. Bragg was interested in the work began by Mme. Curie relating to the ionization of gases. The initial theory and ensuing research work was brilliant and gained Bragg a fellowship of the Royal Society of London. Bragg's work had gained international recognition and acceptance.

In 1909 the Bragg family regretfully left Adelaide in order for W.H. Bragg to take up the position of Cavendish Chair of Physics at the University of Leeds. By 1915 father and son had been awarded the Nobel prize for physics.

Bragg senior remained interested in X-ray crystallography until his death in 1942. He made a monumental contribution to the specific area and to the field as a whole. He was awarded many honours during his lifetime.

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History and Sources

Adelaide played a central role in the life of Bragg. He lived and worked in the city for 23 years, and married into an Adelaide family. Three of his four children were born here. The Bragg Laboratories commemorates Bragg's connection with the city and its University, his contibution to the field of physics in Adelaide and the life of the man himself.

In an architectural sense, the Bragg Laboratories provide a rare example of fine modern architecture, presently poorly represented on the Register.

References

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13757 Bragg Laboratories, The University of Adelaide

Map data is compiled from a variety of sources and hence its accuracy is variable.

Alinytjara Wilurara 250cm - 2007 and Arid Lands 250cm - 2007 Imagery Copyright © JAXA

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0 20 Metres

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Government of South Australia
Department of Environment, Water and Natural Resources