



Australian Institute of Nanoscience Building
The University of Sydney

Statement of Heritage Impact



November 2012

Issue	Description	Date	Issued By
A	Draft for Review	06/06/2012	GL
B	Updated Draft	23/11/12	GL
C	Report Finalised	26/11/2012	GL

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Executive Summary

The subject site is located at the junction of The University of Sydney's Camperdown campus and St Paul's College, immediately south of the Physics Building (A28) and adjacent to the Edward Ford Building (A27) and Wesley College. It is located within the Sydney University Conservation Area (CA47) which is listed as a heritage item of local significance in Schedule 2A of the *South Sydney Local Environmental Plan (LEP) 1998* and the *Draft Sydney LEP 2011*. Part of the site is also included in the Sydney University Site Landscaping and part is in the grounds of St Paul's College which are locally listed heritage items in Schedule 2 of the *South Sydney LEP 1998*.

The proposed works are also in the vicinity of a number of identified heritage items within, and adjacent to, the University of Sydney Campus. These include the Physics Building (A28), Edward Ford Building (A27), Animal House (A27A) and St Paul's College.

As no part of the subject site is included on the NSW State Heritage Register (SHR), or has been nominated for inclusion of the SHR, there is no requirement under the *NSW Heritage Act* to seek approval from the NSW Heritage Council for this application.

In addition to the applicable statutory heritage provisions, this report includes consideration of the following relevant policies and guidelines: *University of Sydney Grounds Conservation Plan*, *School of Physics Conservation Management Plan (CMP)*, *Edward Ford Building and Animal House University of Sydney CMP*, *St Paul's College University of Sydney CMP*.

The *School of Physics CMP*, prepared in 2005, recognised that there is likely to be a need for additional space for the faculty and that this could be provided in a new wing at the rear of the building which would require acquisition of land owned by St Paul's College. The specialised facilities that are to be provided in the proposed AIN Building will ensure the continued use of the adjacent Physics Building for the teaching of Physics which is considered essential to the retention of its significance.

The proposed building will reinforce the historic significance of the university which has continually expanded the institutional uses on the site since its establishment in the 1850s. There will be no adverse impact on the evolving cultural landscape of the university or the aesthetic significance of the buildings within it. It has been designed to respect the historic planning axes within the university and to retain the series of identified significant axial views.

It is recommended that the following conservation and mitigation measures be included in the development approval:

- A requirement that any original fabric removed from the Physics Building be tagged and stored for future conservation purposes.

- The appointment of an experienced heritage consultant to work with the consultant team throughout the design development, contract documentation and construction stages of the project to resolve all matters that involve changes to, or removal of, existing significant fabric of the Physics Building, including services.
- Refinement of the landscaping design to include the selection of flowering climbers for the space at the rear of the Edward Ford Building, and that consideration be given to reusing the stone pillars, removed following the collapse of the jacaranda tree, in this area.
- A requirement that the sandstone from the wall at the rear of the Edward Ford Building is salvaged and reused, with any excess to be tagged and stored for future landscaping works within the university
- Inclusion of the protection measures to be undertaken to ensure there is no unforeseen damage to the adjacent heritage buildings and significant tree in the Construction Management Plan for the project.
- Preparation of an Archival Photographic Recording of the external and internal areas of the Physics Building that are to be impacted.

Graham Brooks and Associates recommends the application to the Department of Planning and Infrastructure for approval, subject to the recommended conservation and mitigation measures.

Introduction

1.0

1.1 Background

This report has been prepared to accompany an application for State Significant Development, SSD 5087-2011, for the construction of a major science research and education facility, the Australian Institute of Nanoscience (AIN Building), at the University of Sydney.

The works required to prepare the site for the construction of the new building are the subject of separate applications and are not considered in this report.

1.2 Report Objectives

The main objective of this Statement of Heritage Impact is to analyse the overall heritage impact of the proposed development in relation to the Environmental Planning Instruments (EPIs) specified in the Director General Requirements (DGRs) and the guidelines endorsed by the NSW Heritage Council.

1.3 Methodology and Structure

This Statement of Heritage Impact has been prepared in accordance with guidelines outlined in the *Australia ICOMOS Charter for Places of Cultural Significance, 1999*, known as *The Burra Charter*, and the New South Wales Heritage Office (now the Heritage Branch of the NSW Office of Environment and Heritage) publication, *NSW Heritage Manual*.

The Burra Charter provides definitions for terms used in heritage conservation and proposes conservation processes and principles for the conservation of an item. The terminology used, particularly the words *place*, *cultural significance*, *fabric*, and *conservation*, is as defined in Article 1 of *The Burra Charter*. The *NSW Heritage Manual* explains and promotes the standardisation of heritage investigation, assessment and management practices in NSW.

1.4 Site Identification

The Camperdown Campus of the University of Sydney is bounded by Parramatta Road, City Road and Missenden Road. The new AIN Building is to be located at the junction of The University of Sydney's Camperdown campus and St Paul's College, immediately south of the Physics Building (A28) and adjacent to the Edward Ford Building (A27) and Wesley College.

1.5 Heritage Management Framework

The Director General Requirements (DGRs) for this project note the following in relation to heritage:

The EIS must address the following specific matters:

8. Heritage

A Heritage impact statement of the likely impacts of the proposal on surrounding/nearby heritage items, including:

- an assessment on the character and significance of heritage items, their setting and the Sydney University Conservation Area;*
- the relationship to any heritage items;*
- construction and operational impacts on adjoining heritage items;*
- assessment of the impacts on views to and from heritage listed buildings;*
- assessment of any impacts on the Wilkinson axis;*
- any impacts on natural areas and places of Aboriginal historic or archaeological significance and consideration of the wider heritage impacts on the surrounding area; and*
- proposed conservation and mitigation measures.*

Relevant Policies and Guidelines:

- University of Sydney Grounds Conservation Management Plan,*
- Individual Conservation Management Plans for heritage items in the vicinity of the site;*
- NSW Heritage Manual (1996); and*
- Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (Office of Environment and Heritage, Department of Premier and Cabinet April 2011)*

The subject site, is located within the Sydney University Conservation Area (CA47) which is listed as a heritage item of local significance in Schedule 2A of the *South Sydney Local Environmental Plan (LEP) 1998* and the *Draft Sydney LEP 2011*. Part of the site is also included in the Sydney University Site Landscaping and part is in the grounds of St Paul's College which are locally listed heritage items in the *South Sydney LEP 1998* and the *Draft Sydney LEP 2011*.

The proposed works are in the vicinity of a number of identified heritage items, within and adjacent to the University of Sydney Campus. These include the Physics Building (A28), Edward Ford Building (A27), Animal House (A27A) and St Paul's College.

As such, the following guidelines and policies have been considered in the preparation of this Statement of Heritage Impact in addition to those specified above:

- University of Sydney Grounds Conservation Plan*
- School of Physics Conservation Management Plan*
- Edward Ford Building and Animal House University of Sydney Conservation Management Plan*
- St Paul's College University of Sydney Conservation Management Plan*

As no part of the subject site is included on the NSW State Heritage Register (SHR), or has been nominated for inclusion of the SHR, there is no requirement under the *NSW Heritage Act* to seek approval from the NSW Heritage Council for this application.

1.6 Authorship

This report has been prepared by Gail Lynch, Associate Director, of Graham Brooks and Associates Pty Ltd, and has been reviewed by the Director, Graham Brooks. Unless otherwise noted all of the photographs and drawings in this report are by Graham Brooks and Associates Pty Ltd.

1.7 Report Limitations

This report is limited to the review of the European significance of the site. Recommendations have been made on the basis of documentary evidence viewed and inspection of the existing fabric.

Aboriginal and Archaeological assessment of the subject site is outside the scope of this report, and is addressed in a separate report.

This report only addresses the relevant heritage planning provisions and does not address general planning or environmental management considerations.

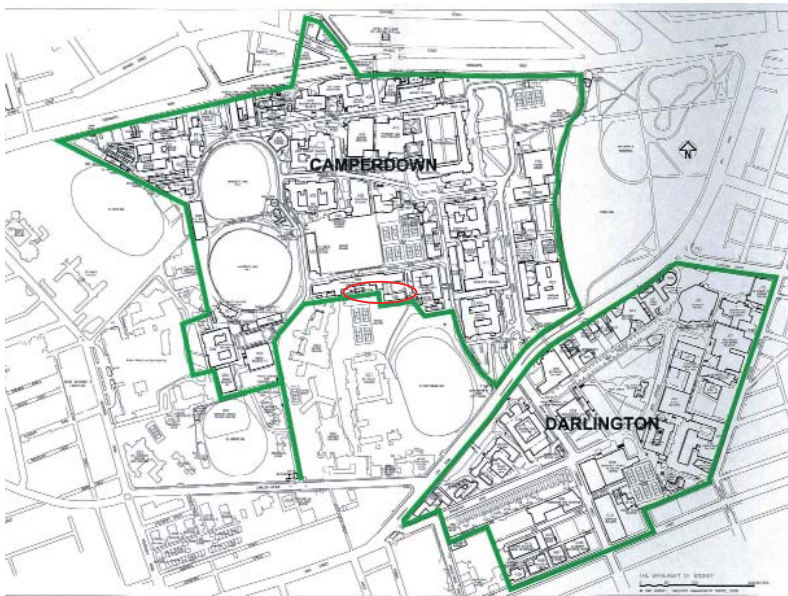


Figure 1.1
Map showing the location of the subject site (marked with a red circle) in relation to the University of Sydney Grounds

Source: *University of Sydney Grounds Conservation Plan*



Figure 1.2
Aerial photograph showing the location of the subject site (marked with a red circle) in relation to the University of Sydney Grounds

Source: NSW Land and Property Information Sixviewer

Historical Summary

2.0

The following historical summary of the site is reproduced from the *Aboriginal Heritage and Historical Archaeology Preliminary Assessment AIN Building, University of Sydney*, prepared by Archaeological & Heritage Management Solutions Pty Ltd (AHMS) in May 2012.

In about 1789, 400 acres of land, including the present Camperdown Campus of the University of Sydney, was set aside as a reserve. The reserve was, at least in part, used as pasture. In 1792, a 30-acre parcel of the reserve was leased to Lieutenant-Governor Grose, and the area as a whole appears to have been known as Grose Farm. Subsequently, several other parcels within the reserve were leased to other officers for cultivation. A sketch plan showing the layout of the reserve and the leases in 1789-98 indicates that the subject area was within the reserve, but not within the leased parcels.

Adjacent to Orphan School Creek, which ran through the reserve, a timber yard was established in 1793. The establishment also included nine huts for convict accommodation. Sixty acres of the reserve were cleared of timber, and 20 acres of this were sown with Indian corn. In 1801, the greater part of the reserve was granted to the Female Orphan Institution, which established a farm on Orphan School Creek.

In 1819, the Female Orphan School was moved to Parramatta, and in 1823 the area known as Grose Farm reverted to the government. The dwelling house was enlarged, and farm buildings and convict accommodation were built. The land was gradually cleared of trees and stumps. In the early 1830s, Grose Farm was divided for lease into grazing paddocks, for stock intended for slaughter and sale in Sydney. It remained in this use through to the early 1850s.

It appears that the main structures built on the property (including the convict stockade) were located on the southern side of Parramatta Road, adjacent to Orphan School Creek. No development is known to have occurred in the subject area, although it is likely to have been cleared in this early period, and may have been used for grazing.

Between 1855 and 1856 about 126 acres of Grose Farm were granted to the University of Sydney, which had been established in 1850. The first University buildings, forming the basis of what is now the Quadrangle, were designed by Edmund Blacket between 1855 and 1862. In the late 1850s, St Paul's College was constructed to the south of the subject area, on land that was reserved for the College from the University grounds.

The subject area is within the original extent of the College land, and at the northern end of what was referred to as St Paul's Meadow. This was a boggy area, and the adjacent creek (a tributary of Orphan School Creek) ran through a substantial gully. Presumably for these reasons, the vicinity of the subject area remained undeveloped well into the twentieth century. At least in the late nineteenth century, the greater part of the land between the University (now the Main Quadrangle) and the colleges was leased as grazing land to a dairy proprietor.

In 1925 the Physics Building (A28) was constructed to the north of the subject area. Construction involved channeling the adjacent creek into a stormwater drain.

In 1930, the Edward Ford Building (A27) and the Animal House (A27A) were built to the east of the Physics Building. ... An undated image, possibly from the 1930s, shows that a small incinerator stood at the western end of the Animal House. Images from the 1930s indicate that the subject area itself remained largely vacant (apart from the Animal House and incinerator),

and grassed area in this period, with a few small trees, some post-and-wire fencing, and a dirt footpath running through the eastern end.

The 1943 aerial photograph shows that a series of slot trenches had been excavated through the subject area, with the spoil piled up on either side (Figure 26). This type of trench was common in public open spaces in Sydney during the Second World War, and was intended to provide protection in the event of aerial attack.

Two small structures were built at the south-western corner of the Edward Ford Building during the Second World War; the Virology Laboratory (A27B, originally an air-raid shelter), and the Flammable Store (A27C).

A photograph from c1960 shows that the slot trenches had been backfilled, and the subject area was still largely vacant. Tall fences are evident, suggesting that [St Paul's] tennis courts had been constructed by this time, roughly in the location of the present courts. The photograph suggests that the location of the courts had been built up through the introduction of fill. Construction of the Physics Annex (A29), falling partly within the subject area, began in 1963 and was completed in 1964.

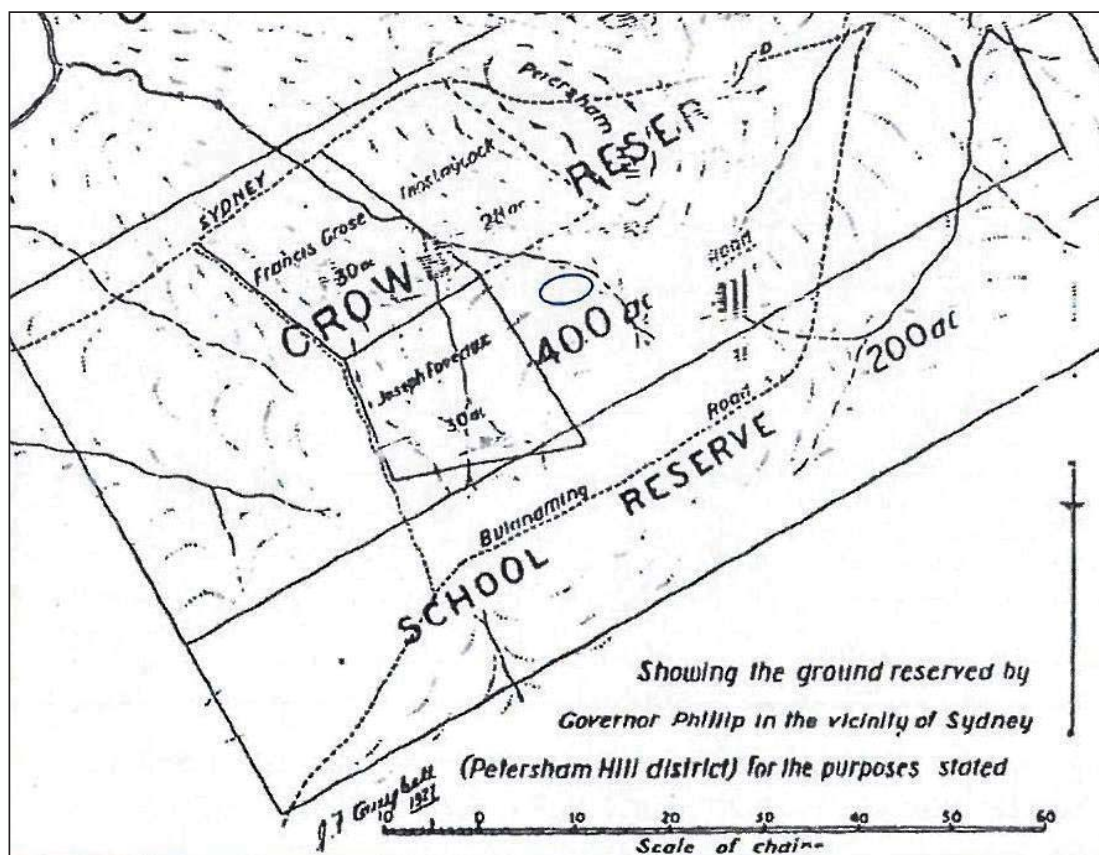


Figure 2.1
Sketch plan showing the layout of the area in 1780-1798, with the approximate location of the subject site circled in blue

Source: *Aboriginal Heritage and Historical Archaeology Preliminary Assessment AIN Building*, University of Sydney, AHMS, May 2012. page 21

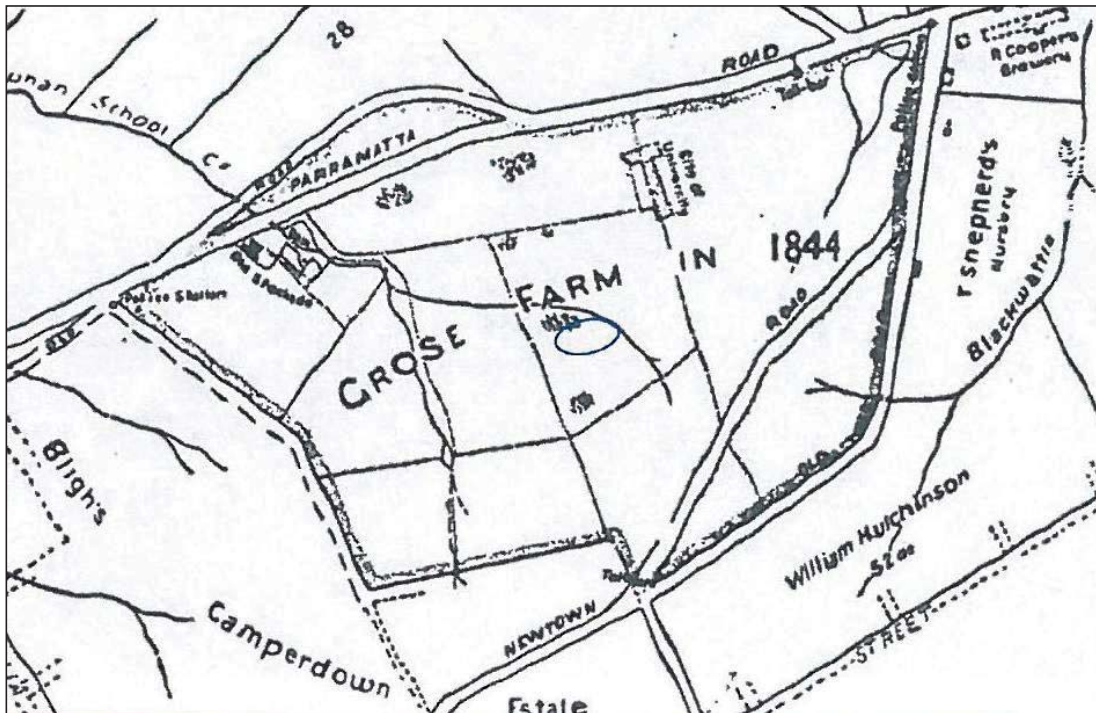


Figure 2.2
Sketch plan showing the layout of the Grose Farm in 1844, with the approximate location of the subject site circled in blue

Source: *Aboriginal Heritage and Historical Archaeology Preliminary Assessment AIN Building, University of Sydney*, AHMS, May 2012. page 21

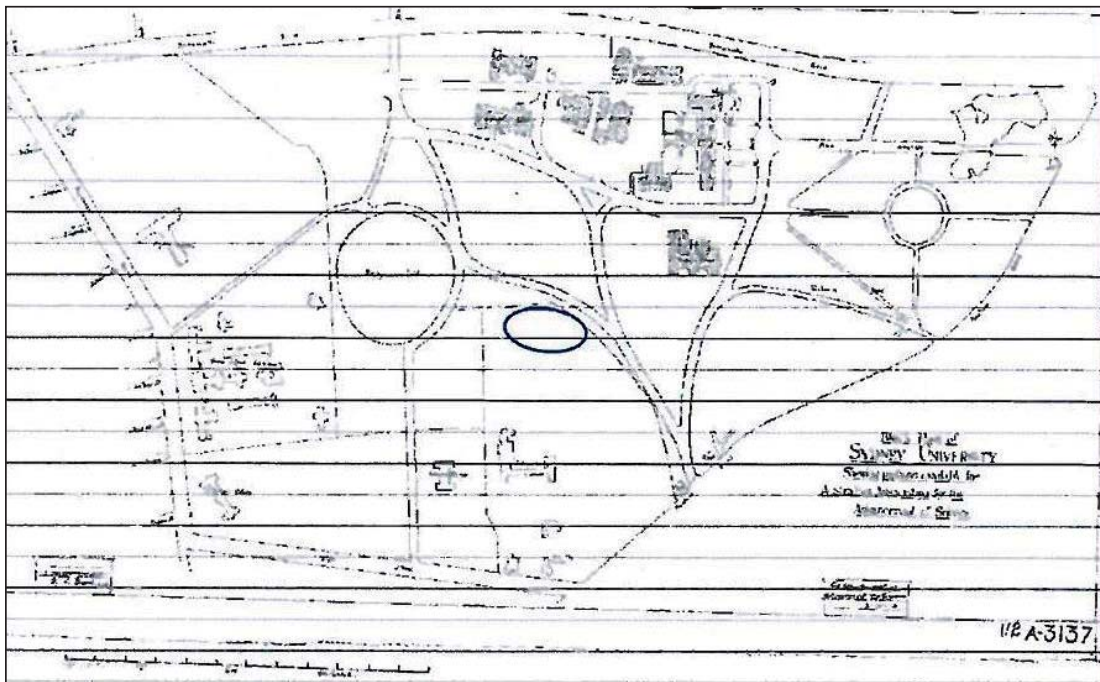


Figure 2.3
1910 plan of the University of Sydney Camperdown campus, with the approximate location of the subject site circled in blue

Source: *Aboriginal Heritage and Historical Archaeology Preliminary Assessment AIN Building, University of Sydney*, AHMS, May 2012. page 22

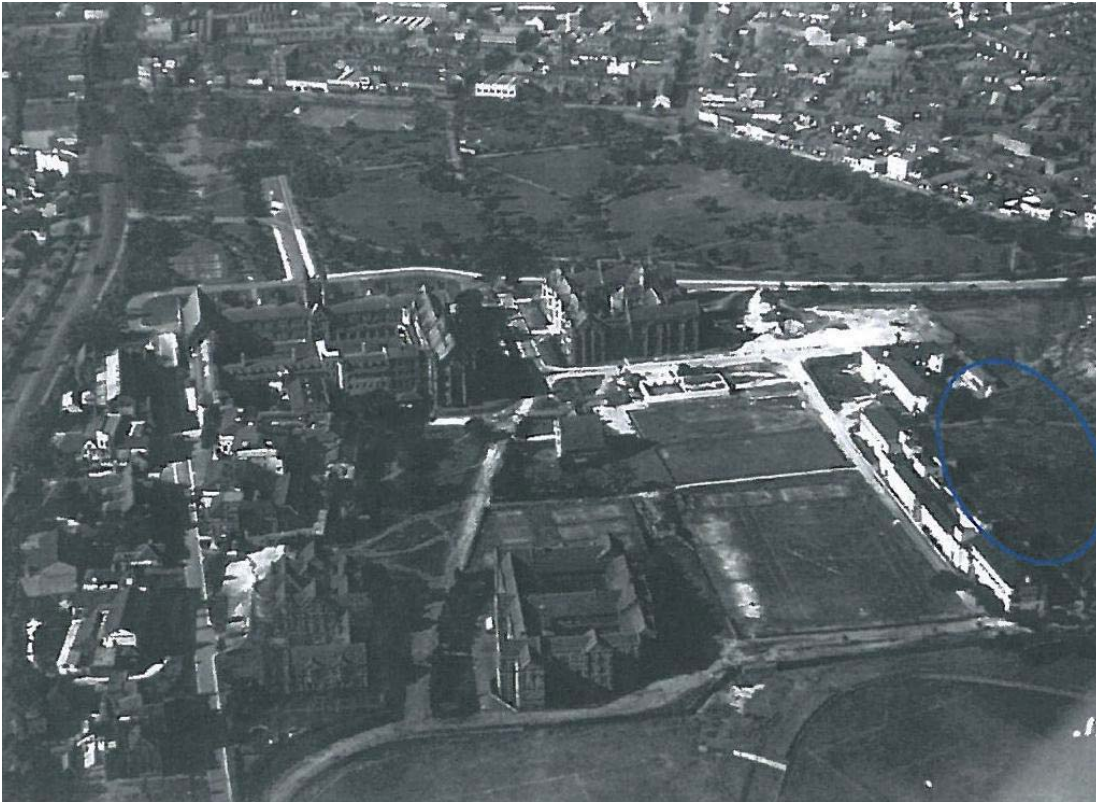


Figure 2.4
1931 aerial photograph of the University of Sydney, with the approximate location of the subject site circled in blue

Source: *Aboriginal Heritage and Historical Archaeology Preliminary Assessment AIN Building, University of Sydney*, AHMS, May 2012. page 22

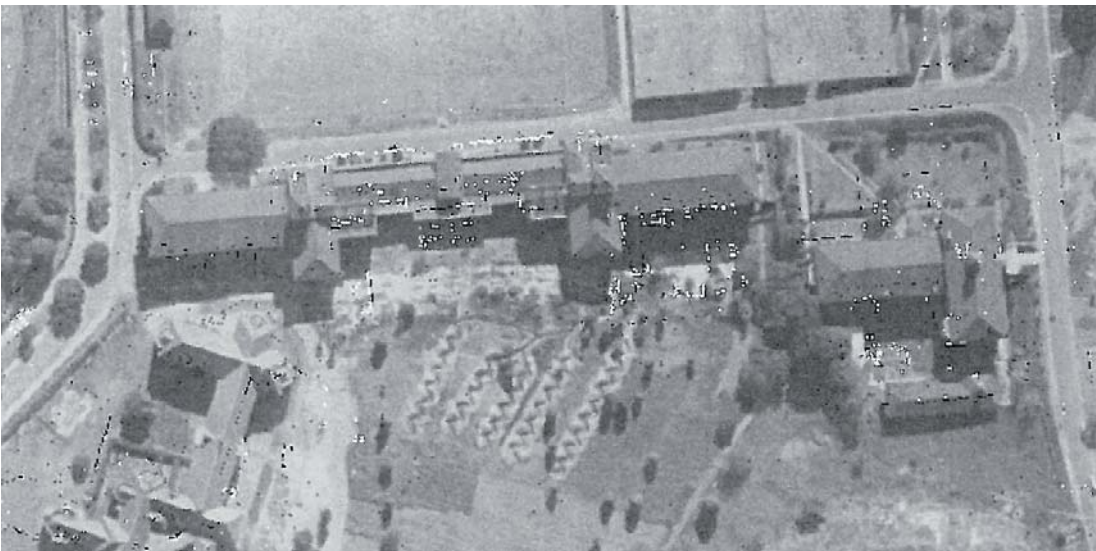


Figure 2.5
1943 aerial photograph of the subject site showing the slot trenches present at that time

Source: NSW Land and Property Information Sixviewer

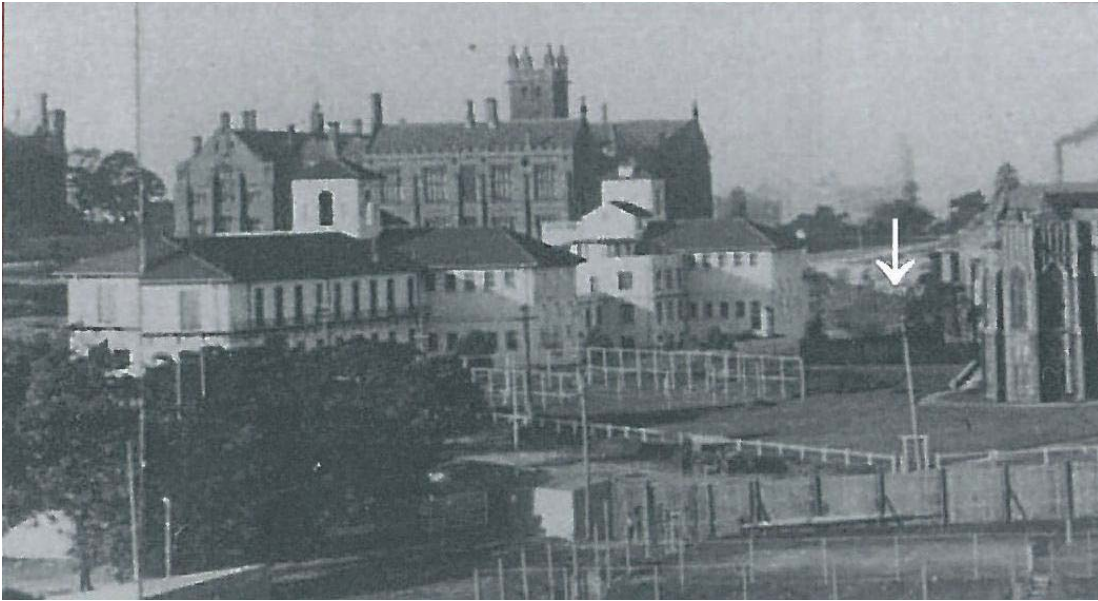


Figure 2.6
Circa 1960 view of the rear of the Physics Building, showing the subject site vacant apart from fencing, and the location of the Physics Annex marked with an arrow

Source: *Aboriginal Heritage and Historical Archaeology Preliminary Assessment AIN Building, University of Sydney*, AHMS, May 2012. page 24

Site Description and Context

3.0

The subject site is located at the junction of The University of Sydney's Camperdown campus and St Paul's College, immediately south of the Physics Building (A28), and adjacent to the Edward Ford Building (A27) and Wesley College, as shown in Figure 3.1. It includes the landscape area adjacent to the western side (rear) of the Edward Ford Building. Early works to prepare the site for building have been approved separately.

The land immediately south of the site is the subject of an separate application for development by St Paul's College, SSD 5313.



Figure 3.1

Plan showing the location of the subject site, hatched in red, in relation to the building of The University of Sydney and St Paul's College

Source: architectus



Figure 3.2
View to the Physics Building (A28) from the northern side of The Square



Figure 3.3
Partial view of the rear of the Physics Building (A28) where the proposed AIN Building is to be located



Figure 3.4
Area at the rear of the Physics Building (A28) where the proposed AIN Building is to be located. Demolition of the Physics Annex (A29), seen on the left, has been approved as part of a separate application



Figure 3.5
Partial view of the rear of the Physics Building (A28) where the proposed AIN Building is to be located



Figure 3.6
Open space at the rear of the Physics Building (A28) where the proposed AIN Building is to be located. Site preparation works in this area are to be approved as part of a separate application



Figure 3.7
The landscape area at the rear of the Edward Ford Building (A27) that is to be modified as part of this application

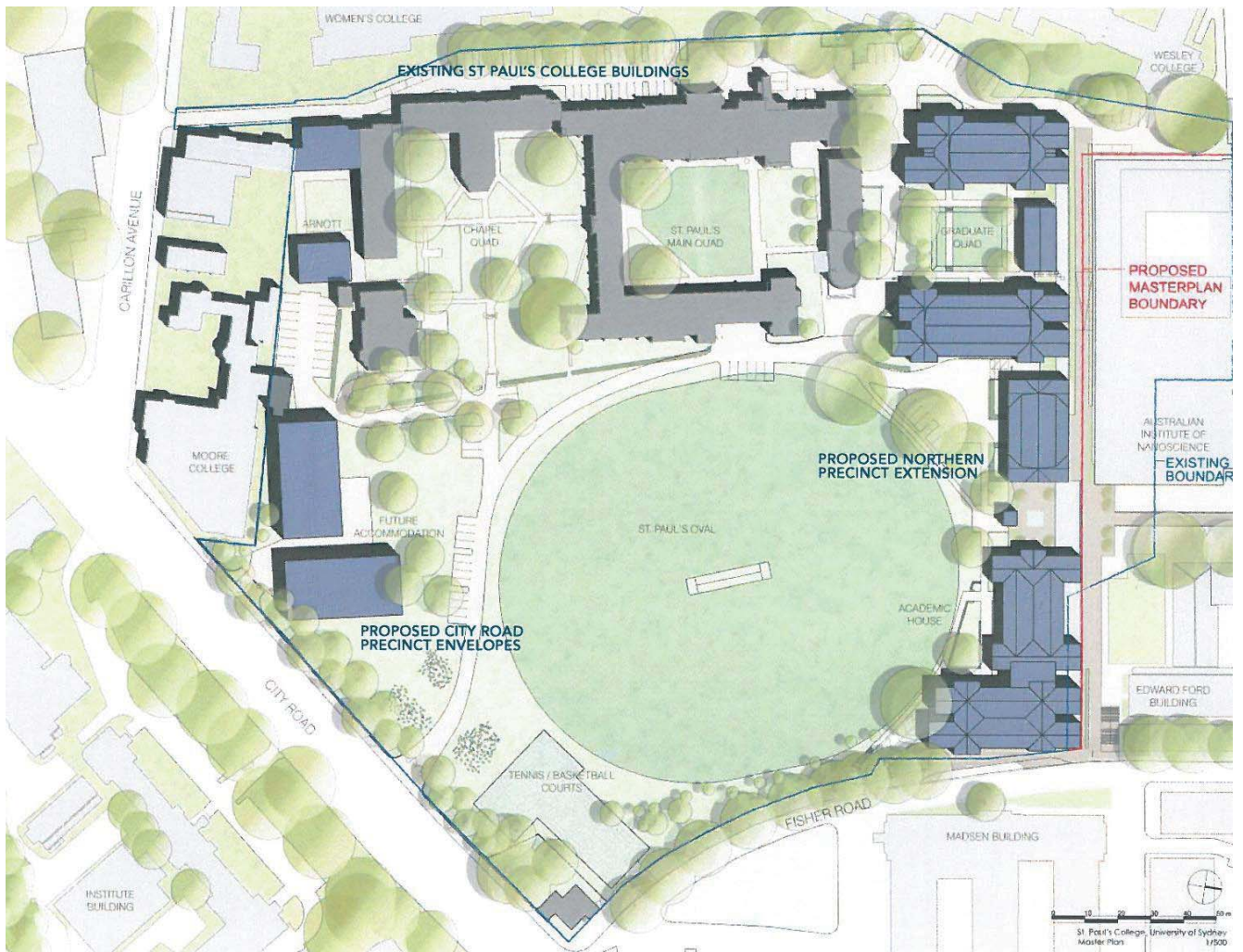


Figure 3.8
St Paul's Master Plan diagram showing the development proposed as part of SSD 5313, in relation to the adjoining AIN site

Source: *University Accommodation St Paul's College University of Sydney Urban Design and Architectural Report*, Cox Richardson Architects and Planners, September 2012



Figure 3.9
North elevation of the development, proposed as part of the St Paul's Master Plan, that will adjoin AIN site

Source: *University Accommodation St Paul's College University of Sydney Urban Design and Architectural Report*, Cox Richardson Architects and Planners, September 2012

Description of the Proposal

4.0

The proposed development, designed by architectus, is detailed in the plans that accompany this application. It includes the following, as shown in the sample of images below:

- Removal of the remnant link between the Physics Building (A28) and the Physics Annex (A29) and the construction of two new interfaces between the new building and the Physics Building (A28)
- Construction of a new science research and education facility building at the rear of the Physics Building (A28)
- Site landscaping, including partial demolition of the sandstone wall at the rear of the Edward Ford Building (A27), and construction of a pedestrian bridge to the St Paul's College grounds.

The following overview of the project is extracted from the *University of Sydney Australian Institute of Nanoscience - Physics Building Principle's Project Requirements Volume 1*, prepared by architectus in October 2012.

Background

The School of Physics at the University of Sydney is the leading Physics school in the country. Its success is predominantly based on theoretical and experimental research excellence in a broad range of disciplines from nanodevices to clusters of galaxies.

Following several decades of success and expansion the current A28 and A29 buildings housing the School of Physics are too small and do not provide a suitable physical environment to support the high-tech research required. In addition, inefficiencies in space utilisation have developed over time as research groups have expanded and contracted, with many becoming fragmented across multiple levels resulting in less than ideal interaction and communication within research teams.

Vision

The Australian Institute of Nanosciences (AIN) will be a world leading research and teaching facility designed to meet the demanding requirements of nanoscience research in decades to come and the only building in Australia to house such an advanced research capability alongside comprehensive facilities for undergraduate and postgraduate teaching.

The AIN Physics Building will have first in Australia capabilities in nanoscience: it will house precision instruments and provide the highly controlled environments required to support basic and applied research aimed at understanding nature at a fundamental level and translating this new knowledge into next generation technological outcomes underpinning revolutionary new electronic and optical devices, biomedical sensors and material systems.

The architectural design of the building will embody the visionary aspirations of the research and teaching programs while harmonising with existing heritage Physics building and integrating the two buildings into a single coherent School of Physics.

Objectives

To achieve academic excellence the new building shall:

Develop a Physics precinct with a new building that complements and integrates the existing building facilities to create a singular experience by:

- *Integration of the existing School of Physics building including physical connections that promote seamless transfer of staff, students and equipment between the new and existing building and circulation routes that avoid 'dead ends' and enable staff located in each building to interact as part of their every day activities.*
- *Creation of strong visual links between the buildings, including exploration of a 'Physics Courtyard' concept between the existing and new building, to act as the social and intellectual heart of the School of Physics, a place for academic debate and social interactions.*
- *Creation of a new primary pedestrian route and entry point for the AIN Physics Building to segregate, where desirable teaching and research foot traffic and provide a 'front door' to the new facility with a strong visual presence on the Campus.*

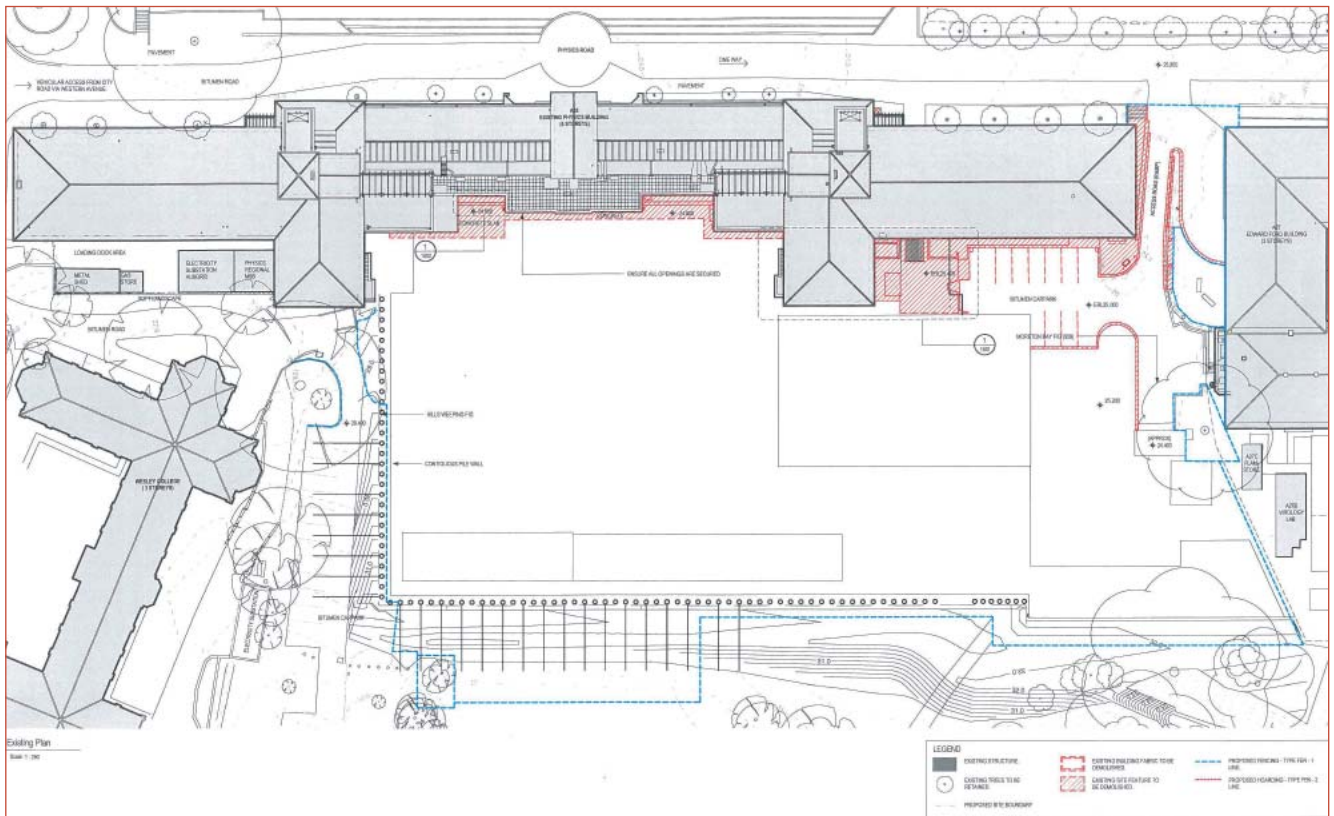


Figure 4.1
Demolition plan showing the remnant link to the former Physics Annex (A28A) and part of the stone wall at the rear of the Edward Ford Building (A27) that are to be removed
Source: architectus

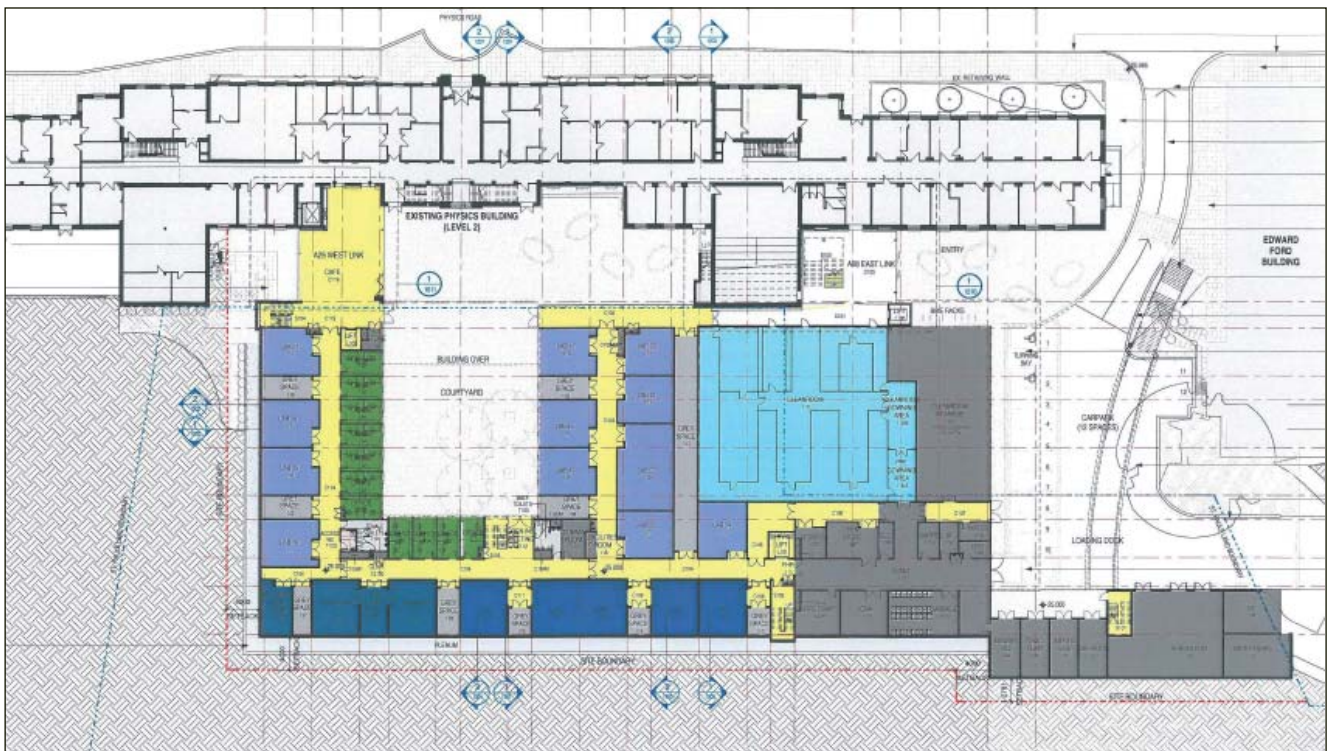


Figure 4.2
Level 1 plan showing the new building and bridge link at the rear of Building A27
Source: architectus

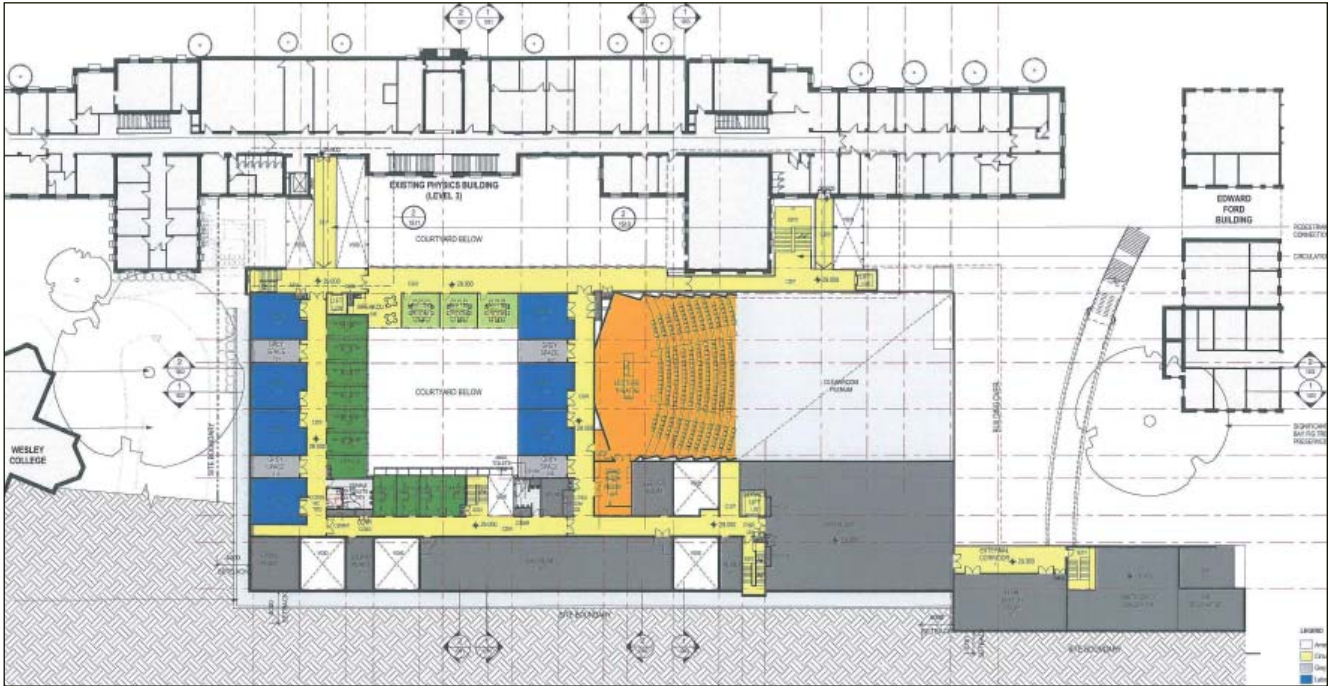


Figure 4.3
Level 2 plan showing the new building and bridge link at the rear of Building A27
Source: architectus

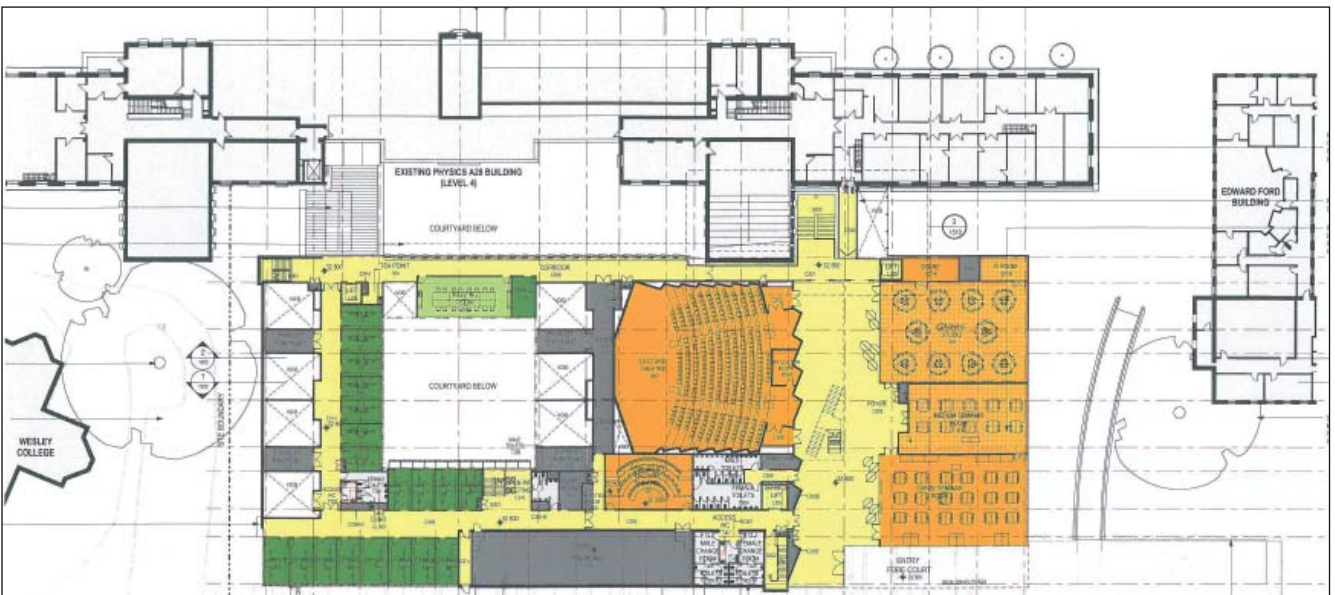


Figure 4.4
Level 3 plan showing the new building and bridge link at the rear of Building A27
Source: architectus

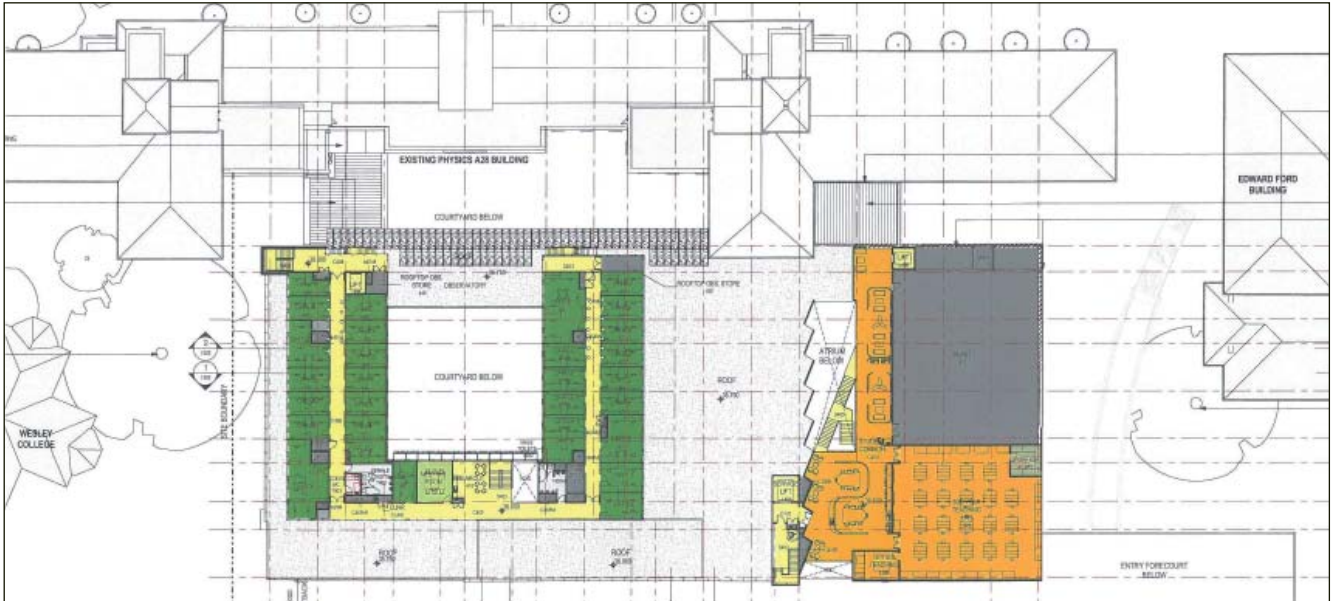


Figure 4.5
Level 4 plan of the new building
Source: architectus

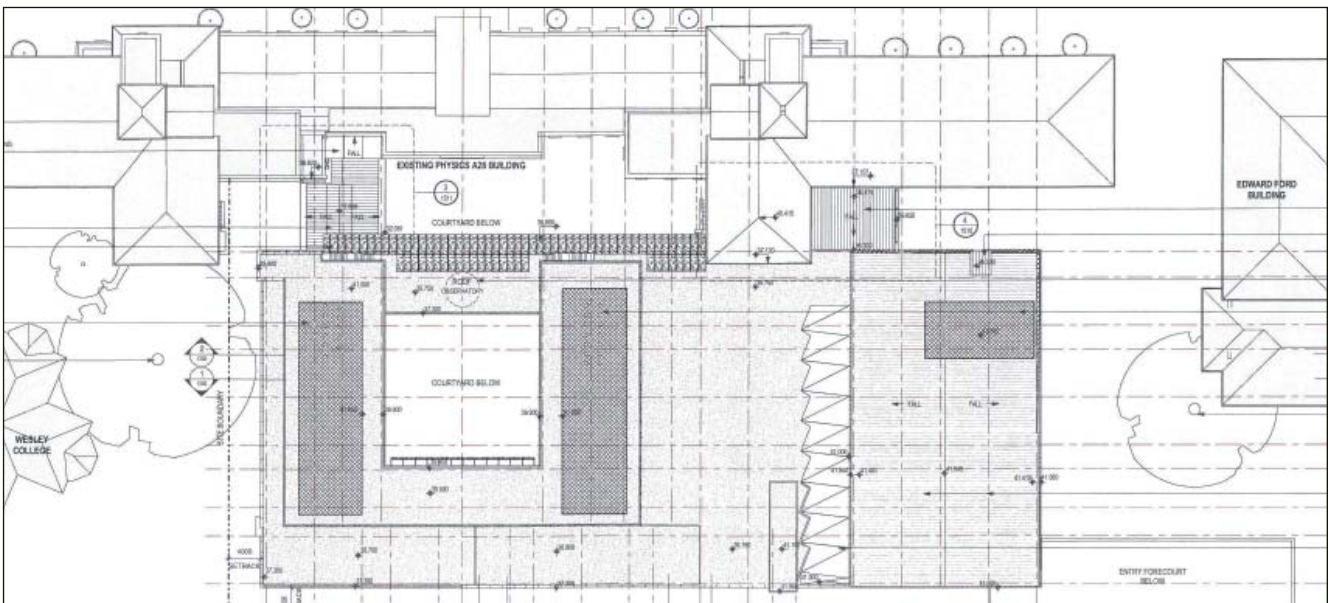


Figure 4.6
Roof plan of the new building
Source: architectus



Figure 4.7
East elevation of the new building, in relation to the Physics Building (A28) and the proposed St Paul's College development
Source: architectus



Figure 4.8
South elevation of the new building, in relation to the Physics Building (A28)
Source: architectus

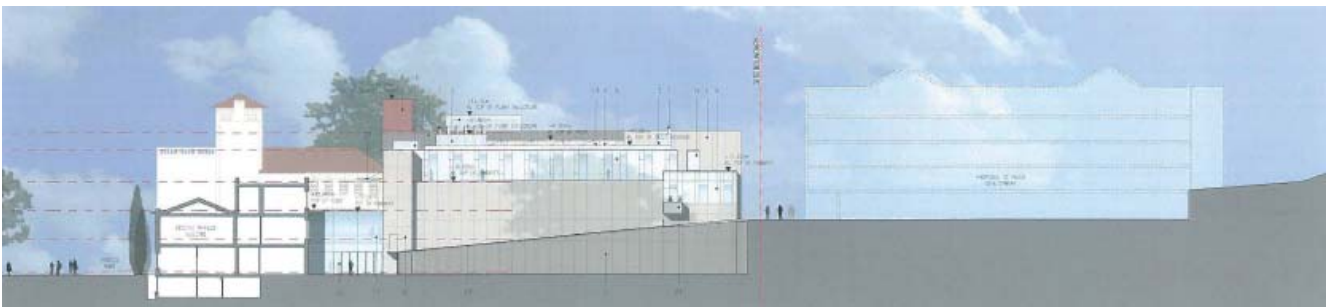


Figure 4.9
West elevation of the new building, in relation to the Physics Building (A28) and the proposed St Paul's College development
Source: architectus

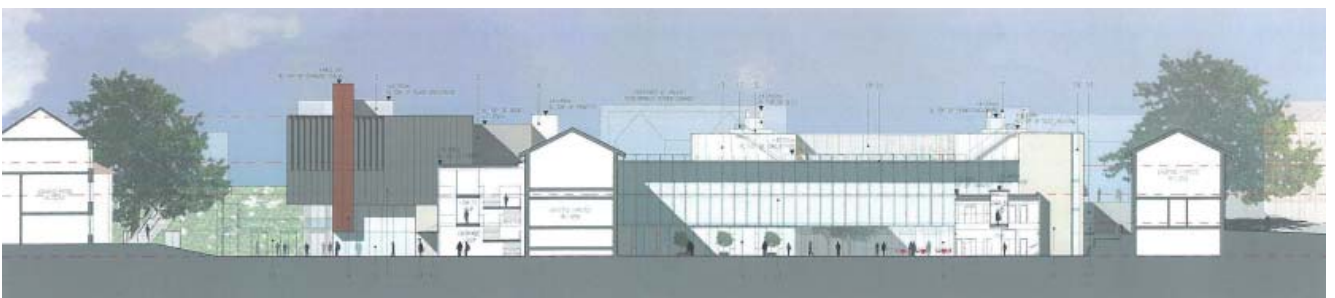


Figure 4.10
North elevation of the new building, in relation to the Physics Building (A28) and the proposed St Paul's College development
Source: architectus

Established Significance of the Subject Site and its Surrounds

5.0

5.1 Introduction

The subject site, is located within the Sydney University Conservation Area (CA47) which is listed as a heritage item of local significance in Schedule 2A of the *South Sydney Local Environmental Plan (LEP) 1998* and the *Draft Sydney LEP 2011*. Part of the site is also included in the Sydney University Site Landscaping and part is in the grounds of St Paul's College which are locally listed heritage items in Schedule 2 of the *South Sydney LEP 1998*.

The proposed new building is to be located immediately adjacent to, and connected to, the University of Sydney School of Physics Building, Building A28. The Physics Building is listed as an individual item of local heritage significance in the *South Sydney LEP 1998* and *Draft Sydney LEP 2011*, and is included in *The University of Sydney Section 170 Register*.

The proposed development is to be located in the vicinity of a number of other identified heritage items, within and adjacent to the University of Sydney Campus. These include the Edward Ford Building, Animal House and St Paul's College. The aerial photograph in Figure 5.3 shows the location of these heritage items in relation to the subject site. The established heritage significance of these items is detailed below.

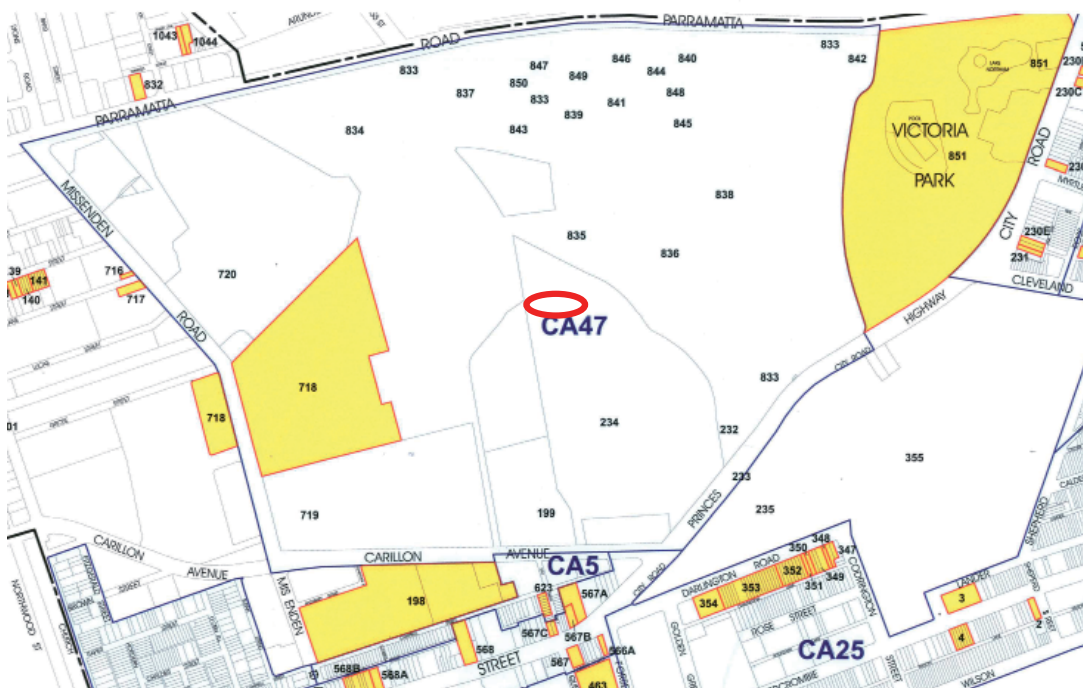


Figure 5.1
Extract from the South Sydney Heritage Map showing the boundaries of the Sydney University Conservation Area with the approximate location of the subject site circled in red.

Source: City of Sydney website



Figure 5.2
Extract from the *Draft Sydney LEP 2011 Heritage Map Sheet 9* showing the approximate location of the subject site circled in red.

Source: City of Sydney website

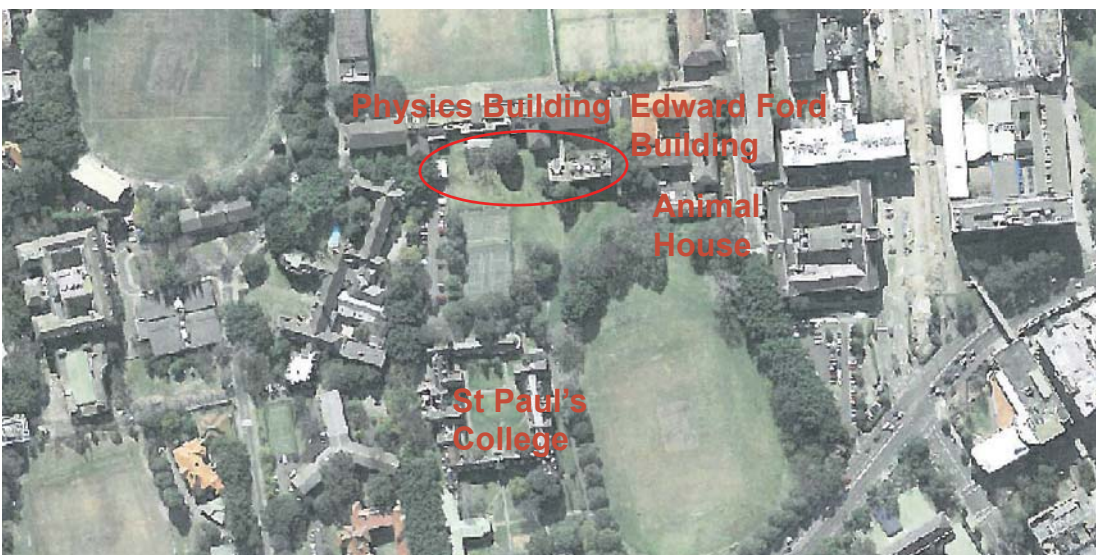


Figure 5.3
Aerial photograph showing the approximate location of the subject site, marked with a red circle, and the location of the heritage items in its vicinity

Source: NSW Land and Property Information, Sixviewer

5.2 Sydney University Conservation Area

The subject site is located within the boundaries of the Sydney University Conservation Area (CA47), listed as an item of local heritage significance on Schedule 2A of the *South Sydney LEP 1998* and the *Draft Sydney LEP 2011*. The following Statement of Significance for this conservation area has been sourced from the NSW State Heritage Inventory entry for item id 2431001:

The university is a heritage cultural landscape containing buildings of exceptional individual value set within a designed landscape with large areas enclosed by a historic fence. The place developed into a series of precincts each with a special character. The Conservation Area has significance as the site of the first University in Australia established in 1850, operating continuously at Camperdown since 1858. The site has historic significance for its continuing association with the development of tertiary education in Australia. Incorporating Prince Alfred Hospital and various residential colleges, the Area represents the establishment and continued expansion of institutional uses on Grose Farm.

The area has high aesthetic significance for its collection of fine buildings and public spaces dating from the 1850s, and has association with several prominent architects including Blacket, Vernon and Wilkinson.

The continuing function of the institution as a University is also of exceptional cultural significance. An important Sydney landmark, containing what is probably the most significant group of Gothic Revival buildings in the country.

5.3 Sydney University Site Landscaping

Part of the subject site is located within the boundaries of heritage item number 833, the University of Sydney Site Landscaping, listed in Schedule 2 of the *South Sydney LEP 1998* and the *Draft Sydney LEP 2011*. The following Statement of Significance, for this locally listed item has been sourced from the NSW State Heritage Inventory entry for item id 2421454:

Site landscaping includes perimeter fence, Ross Street, Parramatta Road and City Road gates and sandstone pillars, pergola of two Doric columns and fountains.

A detailed Statement of Significance can be found in the *University of Sydney Grounds Conservation Plan - October 2002 (Grounds CP)*. This is summarised in the *Grounds CP* as follows:

The University of Sydney Grounds are significant because:

- 1. they retain evidence of the continuous human occupation of the place from Aboriginal time, through the earliest period of European settlement of Australia, to the current day;*
- 2. the University of Sydney is the oldest university in Australia, and has continuously occupied and developed its campus for over 150 years, resulting in a distinctive pattern of planned features;*
- 3. a number of individual precincts, buildings and features are significant in their own right;*
- 4. the Main Building Group, Anderson Stewart Building, Gate Lodges, and St Paul's, St Johns and St. Andrews Colleges comprise what is arguably the most important group of Gothic and Tudor revival architecture in Australia;*
- 5. the layout and development of the Camperdown campus reflects directly changes in tertiary education, landscape design, institutional design, economic development and social attitudes over that period;*

6. the student union and sports facilities reflect the history, and changes in, recreational and social activities over a long period of time;

7. Darlington campus owes its layout to the pattern of the original suburb, and retains important evidence reflecting its residential and industrial past. Darlington was the site of a major expansion of the University, reflecting important changes in the history of tertiary education in Australia; and

8. the University grounds are of social significance because of strong and special associations with particular communities and cultural groups.

The *Grounds CP* notes that the jacaranda tree at the rear of the Edward Ford Building is a notable feature of the University within the subject site. In June 2012 this tree fell over in a storm, damaging the adjacent pergola, and was subsequently removed.

5.4 Physics Building

The Physics Building is identified as an item of local heritage significance on Schedule 2A of the *South Sydney LEP 1998*, the *Draft Sydney LEP 2011* and *The University of Sydney Section 170 Register*. The following extract from the Statement of Significance for this item is sourced from the *School of Physics CMP*:

The School of Physics is historically significant as the direct descendent of the original Physics school established at the University of Sydney, which contained the first purpose built physics laboratory in Australia. The transfer of the collection commenced by Professor Threlfall, reflected this continuity, showcasing Australian innovations such as Lawrence Hargraves flying machine models.

The construction of a substantial School of Physics outside of the science precinct shows the expansion of the teaching of science in the early 20th Century. The plan layout reflects the growth of the school from a single professorship during the 1880s to four professors in the 1920s, whose offices and associated laboratories Wilkinson placed in the towers. Some of the original furniture, particularly the tables with grooves to catch mercury, survives, as does a sequence of architectural drawings, photographs and Dellit's presentation sketch.

From 1950 new departments within the School of Physics were created and industry funded research programs, such as SILLIAC funded with a donation from Mr. Bassor's Melbourne Cup winnings.

The School of Physics continues to be used for the purpose for which it was designed, with evidence of the original configuration of the large laboratories and the lecture theatres surviving internally and externally.

Associated with the development of the teaching of Physics at the University of Sydney and with the training of many prominent Australian scientists, both historically and today. Alterations to the building reflect growing staff and student numbers, the requirements of more recent professors and the introduction of new technologies for teaching and research purposes. Former staff and students are likely to have strong associations with both the School and the University in general.

A rare example of a purpose designed science faculty still in use for the purpose for which it was intended. Sydney University retains the longest sequence of Physics laboratories in the country, the former Physics Laboratory in Science Road, the School of Physics and subsequently the Physics Annex. Evidence of the sequence of laboratories survive.

A rare large and substantially intact example of a Mediterranean style building designed by Leslie Wilkinson. The building has a high degree of integrity, retaining evidence of its original layout of large laboratories in the end pavilions, professorial offices, with attached laboratories, in the towers, with lecture theatres to the rear, smaller labs in the central section (now subdivided), and a central entrance foyer and stair tower.

For the 50 year association with the Science Foundation, that promotes both the school and the teaching of Physics generally.

5.5 Edward Ford Building and Animal House

The Edward Ford Building (A27) is identified as an item of local heritage significance on Schedule 2A of the *South Sydney LEP 1998*, the *Draft Sydney LEP 2011* and *The University of Sydney Section 170 Register*. The Animal House (A27A) is included in the *South Sydney LEP 1998* and *Draft Sydney LEP 2011* as part of the curtilage of the Edward Ford Building entry and is identified on *The University of Sydney Section 170 Register* as a separate item.

The following Statement of Significance for the Edwards Ford Building is sourced from the *Edward Ford Building and Animal House University of Sydney CMP*:

The Edward Ford Building, constructed in 1929-30 to the design of the Commonwealth Department of Works and Railways to a concept by celebrated Australian architect Professor Leslie Wilkinson, is one of a group of University buildings in a Mediterranean-inspired style, which contributes greatly to the streetscape character of the University. It was the first building on the University campus to be entirely funded by the Commonwealth government, reflecting the national importance of public health education and research in the 20th century. Featuring a number of elements of aesthetic significance, the Edward Ford Building contributes substantially to the streetscapes of Physics and Fisher Roads, which are main roads within the University.

Associated with a number of individuals of note for their contribution to medical research, the building continues to be held in high regard by the University community and the community at large, including the National Trust of Australia (NSW Chapter) for its heritage values.

The following Statement of Significance for the Animal House is sourced from the NSW Heritage Inventory:

The establishment of the School of Public Health and Tropical Medicine was an example of the Commonwealth government's increasing interest in using state universities for projects of interest at the national level.

One of a number of purpose built animal facilities at the University of Sydney

5.6 St Paul's College

St Paul's College is identified as an item of local heritage significance on Schedule 2A of the *South Sydney LEP 1998*, and the *Draft Sydney LEP 2011*. The following Summary Statement of Significance for this item is sourced from the *St Paul's College University of Sydney Conservation Management Plan*, prepared by Clive Lucas, Stapleton and Partners Pty Ltd in September 2012:

St Paul's College is of exceptional significance as Australia's oldest university college and as one of three foundation colleges affiliated with the University of Sydney, Australia's oldest university. St Paul's College is historically significant for its role in the establishment and development of tertiary education in Australia, and its associations with many eminent Australians.

St Paul's College is a remarkable college, quadrangle and grounds and includes the vest Gothic revival college quadrangle in Australia, including the buildings of Edmund Blacket (1817-1993).

The site, buildings and grounds together with the St Paul's College archives held on site provide a unique resource into the history of the place as well as the history of the University of Sydney and of tertiary education and collegiate life in Australia more generally,

The college is held in high esteem by current and past students and staff.

Heritage Management Considerations

6.0

6.1 Introduction

The following controls, guidelines and policies have been considered in the preparation of this Statement of Heritage Impact for the AIN Building.

- *South Sydney LEP 1998*
- *Draft Sydney LEP 2011*
- *City of Sydney Heritage DCP 2006*
- *University of Sydney Grounds Conservation Plan*
- *School of Physics Conservation Management Plan*
- *Edward Ford Conservation Management Plan*
- *St Paul's College University of Sydney Conservation Management Plan*
- *New South Wales Heritage Manual (1996)*

6.2 South Sydney Local Environmental Plan 1998

The following provisions outlined in the *South Sydney LEP 1998*, that apply to heritage items, and development in the vicinity of heritage items, are applicable to the proposed development:

22 Heritage aims

The consent authority must not grant consent to the carrying out of development on the site of a heritage item, or within a heritage conservation area or heritage streetscape area, unless it is of the opinion that the proposal is consistent with the following aims and objectives:

- (a) to conserve the environmental heritage of the land to which this plan applies, and*
- (e) to ensure that any development is undertaken in a manner that is sympathetic to, and does not detract from, the heritage significance of heritage items, of heritage conservation areas and their setting, and of streetscapes within heritage streetscape areas and their setting, and*
- (f) to ensure that any development is undertaken in a manner that is sympathetic to, and does not detract from, the heritage significance of distinctive streetscapes, landscapes and architectural styles which define the character of heritage conservation areas or streetscapes within heritage streetscape areas, and*

23 Protection of heritage items

- (2) Consent must not be granted to a development application required by subclause (1) unless the consent authority has taken into consideration the extent to which the carrying out of the proposed development would affect the heritage significance of the item.*

23A Protection of heritage conservation areas and heritage streetscapes

- (2) The consent authority must not grant consent to a development application required by subclause (1), being an application to erect a new building or to alter an existing building, unless it has made an assessment of:*

- (a) the pitch and form of the roof, and*
- (b) the style, size, proportion and position of the openings for windows and doors, and*
- (c) whether the colour, texture, style, size and type of finish of materials to be used on the exterior of the building are compatible with the materials used in the existing buildings in the heritage conservation area or heritage streetscape area in which the building is situated, and*
- (d) the impact on the landscape.*

24 Development in the vicinity of heritage items, heritage conservation areas, heritage streetscape areas, archaeological sites or potential archaeological sites

The consent authority must not grant consent to development on land in the vicinity of a heritage item, a heritage conservation area, a heritage streetscape area, an archaeological site or a potential archaeological site unless it has considered an assessment of the impact the proposed development will have on the heritage significance, curtilage and setting of the heritage item, on the heritage significance of buildings within the heritage conservation area, or on the heritage significance of the streetscape within the heritage streetscape area or of the actual or potential archaeological site, as well as the impact of the development on any significant views to or from the heritage item, heritage conservation area or streetscape.

6.3 Draft Sydney Local Environmental Plan 2011

The *Draft Sydney LEP 2011* was on public exhibition from 2 February 2011 to 21 April 2011. The following provisions of this Draft LEP, that apply to heritage items, and development in the vicinity of heritage items, are applicable to the proposed development:

5.10 Heritage conservation

(1) Objectives

The objectives of this clause are:

- (a) to conserve the environmental heritage of the City of Sydney, and*
- (b) to conserve the heritage significance of heritage items and heritage conservation areas including associated fabric, settings and views, and*
- (c) to conserve archaeological sites, and*
- (d) to conserve places of Aboriginal heritage significance.*

(4) Effect on heritage significance

The consent authority must, before granting consent under this clause, consider the effect of the proposed development on the heritage significance of the heritage item or heritage conservation area concerned.

6.4 City of Sydney Heritage Development Control Plan 2006

The following guidelines of the *City of Sydney Heritage DCP 2006* are considered relevant to the Concept Plan proposal:

2 Vicinity controls

2.1 Objectives

The objective of these provisions is to ensure that development in the vicinity of heritage items is designed and sited to protect the heritage significance of the item.

2.2 Provisions

(1) Alterations and additions to buildings and structures, and new development of sites in the vicinity of a heritage item are to be designed to respect and complement the heritage item in terms of the:

- (a) building envelope;*
- (b) proportions;*
- (c) materials, colours and finishes; and*
- (d) building and street alignment.*

(2) Development in the vicinity of a heritage item is to minimise the impact on the setting of the item by:

- (a) providing an adequate area around the building to allow interpretation of the heritage item;
- (b) retaining original or significant landscaping (including plantings with direct links or association with the heritage item);
- (c) protecting (where possible) and allowing the interpretation of archaeological features; and
- (d) retaining and respecting significant views to and from the heritage item.

3 Controls for heritage items

3.1 Objectives

The objectives of these provisions are to ensure that development to heritage items:

- (i) encourages the retention of existing heritage items and their significant elements;*
- (ii) is based on the understanding and conservation of the heritage significance of the item;*
- (iii) encourages heritage items to be used for purposes that are appropriate to their heritage significance;*
- (v) maintains the setting of the heritage item including the relationship between the item and its surroundings;*
- (vi) encourages the removal of inappropriate alterations and additions, and the reinstatement of significant missing details and building elements; and*
- (vii) is consistent with policy guidelines contained in the Heritage Inventory Assessment Report*

3.2 Provisions

(2) Development to a heritage item is to:

- (a) be consistent with an appropriate Heritage Impact Statement, Conservation Management Plan or Conservation Management Strategy*
- (b) be consistent with the Heritage Inventory Assessment Report;*
- (c) protect the setting of the heritage item;*
- (d) retain significant internal and external fabric and building elements;*
- (e) retain significant internal and external spaces;*
- (f) remove unsympathetic alterations and additions;*
- (g) reinstate missing details and building elements;*
- (h) use materials, finishes and colours that are appropriate to the significant periods of development or architectural character of the item; and*
- (i) respect the pattern, style and dimensions of original windows and doors.*

(5) Original and early trees, plantings, garden layouts and landscaping should be retained and traditional garden designs should be reinstated where possible.

6.5 The University of Sydney Grounds Conservation Plan

The *University of Sydney Grounds Conservation Plan (October 2002) (Grounds CP)* is a non statutory document, prepared and adopted by The University of Sydney as a broad policy framework to ensure the heritage values of the university site are conserved in the context of a contemporary, expanding university. It recognises that the heritage values of the university extend beyond the buildings to the setting, landscaping, plantings, views and vistas of the campus.

As shown in Figure 6.1, the majority of the subject site is outside the primary area covered by this plan and is within a related area.

The *Grounds CP* contains the following policies considered applicable to development of the subject area.

Policy 1 Significance the basis for planning and work

The statement of cultural significance set out in Chapter 5 should be a principal basis for future planning and work. (Reproduced in Section 5.3 of this report)

Policy 2 Adoption of Burra Charter

The conservation and development of the University of Sydney Grounds, being a place of cultural significance, should be carried out in accordance with the principles of the Australia ICOMOS Burra Charter, and any revisions of that Charter that might occur in the future.

Policy 4 Conservation of the historical planning framework of the University grounds

The basic historical planning framework of the University grounds should be conserved. This comprises the key historical axes of the campus development, people movement, and view and vistas through the two campuses, these being:

- *Petersham Ridge / Eastern Avenue axis*
- *Science Road Axis*
- *Manning Road axis*
- *Physic Road axis*
- *Western Avenue / Ross Street axis*
- *Fisher Road axis*
- *St Pauls / Refectory vista axis*
- *Darlington suburban road pattern*

Conservation of individual components of the place should respect these axes. New developments and uses should be planned to retain or reinforce these axes, without diminishing the significance of any component of heritage significance.

Policy 8 Retention and maintenance of vista and views and the settings of significant buildings

FMO should protect the lines of vista and views identified in this report. Maintenance would involve the judicious pruning or removal of encroaching vegetation, and the maintenance of framing vegetation and other landscape and built elements. The siting and design of new buildings, planting and other grounds features should be limited so as not to obscure or otherwise reduce significant views, vistas, or other heritage values.

Policy 9 Maintain and protect plantings with significant attachment to particular buildings

Some plantings close to particular buildings were associated with the original design of the buildings, or have subsequently become an important part of the building's setting. Where such plantings and related buildings are shown to have associations of heritage significance, the plantings should, where feasible, be maintained.

Policy 10

Where new planting or landscape features are to be developed, they should be planned so as to conserve or reinforce heritage values of the related building, spaces and views. This should extend to the selection of plant species, grouping and massing of planting, the appropriate design of fencing, road surfacing and hard landscaping.

Policy 13 Design road and parking to be compatible with heritage significance

Road design, traffic flow rates, and parking areas should be designed to minimise conflict with the conservation and appreciation of heritage features, vistas and views.

Policy 16 New developments or changes to existing buildings or grounds features to respect heritage significance

The conservation of significant components and values of the grounds should be ensured before any new building or grounds developments or changes to existing buildings are approved. Other policies deal with the conservation of significant components and values.

Policy 17 Relate new buildings to heritage buildings, spaces and views

Ensure that the design and orientation of new or altered buildings and other developments are sympathetic to significant buildings, open spaces, views and vistas, and the historical planning framework.

Policy 20 Overall primary use of the grounds

The grounds should continue to be used for University purposes including teaching and research, and to provide support services and passive and active recreational amenities for the University community.

Policy 22 Conservation of significant uses

Particular parts of the grounds should be used in ways which help conserve and interpret their heritage significance.

- Science, Manning and Physics, Fisher Roads, and adjacent curtilage - pedestrian use and low key, short term university activities, (vehicular use of roads acceptable, but not essential to significance)
- s.170 Register buildings - uses that retain traditional scale of occupation, conserve significant fabric, and retain important associated elements of the grounds, views and vistas

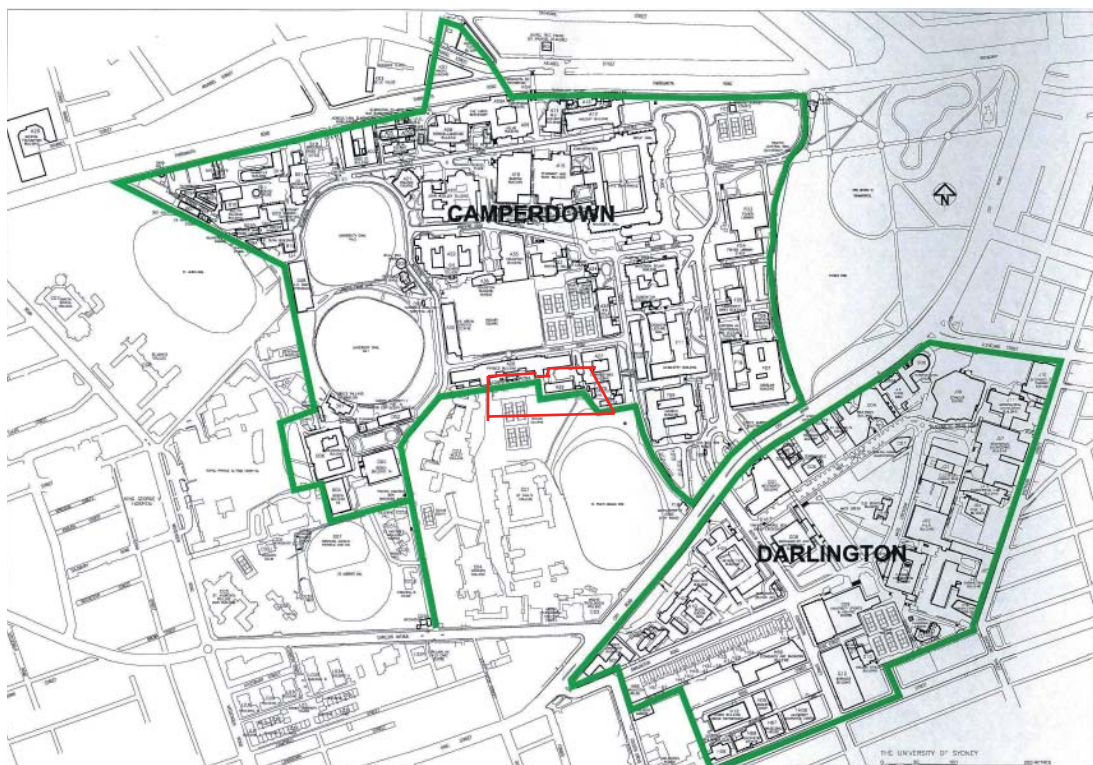


Figure 6.1 Map showing the approximate location of the subject site, outlined in a red, in relation to the University of Sydney Grounds Source:Grounds CP

6.6 School of Physics Conservation Management Plan

The *School of Physics Conservation Management Plan (CMP)* contains the following policies considered applicable to development of the subject site:

Policy 2.1.1

Retain the overall character of the university campus by retaining the vistas intended by Wilkinson in his 1920 plan.

Policy 2.1.2

Ensure that the major cross axis that extends from the northern side of Science Road (the refectory) through the University Grounds to St Paul's College beyond is retained in future campus master plans and in schemes for additional buildings.

Policy 2.1.3

Liaise with St Paul's College regarding the improvement of the vistas back across the university grounds, including pruning trees that currently substantially obscure the vista of the college from within the University Grounds.

Policy 2.1.4

Use photomontages to assess the impact on vistas of proposed additions such as lift towers and the impact of sheds to rear of Physics Building.

Policy 2.1.5

Seek to ensure that the Physics building remains visible from all points along the main cross axis, the surviving portion of the second view line and as you move east or west along Physics Road.

Policy 2.1.6

Ensure any future additions to the Physics building (including alterations to, or replacement of the Annex) are designed considering the significant vistas, as have been identified in the University of Sydney Grounds Conservation Plan, Volume 1, namely:

- *The Refectory to St Pauls Cross Axis*
- *The view southwest from the Manning Building terrace*
- *The views from the loggia to the Tennis pavilion*
- *The view as you move west along Physics Road*

Policy 2.1.7

Ensure that Statements of Heritage Impact include an assessment of the impact on the significant vistas. Ideally this impact should be assessed using photomontages

Policy 2.1.8

Retain the central lowered portion of the building that was specifically designed to retain the view of St Paul's College tower. Elements that project beyond the roofline in this area should not be permitted if they can be seen in either of the two main lines of site.

Policy 2.2.1

Ensure future proposals for the Wilkinson designed buildings, the Physics Building, the School of Tropical Medicine, the R. C. Mills Building and the Tennis Pavilion respect the intended Mediterranean character, which contributes to the townscape of this part of the Campus.

Policy 2.2.3

Seek to re-instate a landscaped pedestrian courtyard between the former School of Tropical Medicine and the School of Physics incorporating the pergola and the surviving plantings. Relocate unsightly functions such as garbage dumpsters whilst improving delivery access.

Policy 2.2.4

Enliven the facade of the Physics Building by the occasional splash of colour to the pergolas, possibly utilising the range of plantings associated with this style of architecture, particularly flowering climbers (wisterias, bouganvilleas, ornamental grape or star jasmine) and potted plants such as geraniums.

Policy 4.1.1

Continue the tradition of university buildings that are designed with four high quality elevations.

Policy 4.1.2

Conserve the surviving evidence of the original external form of the Physics Building, including the continuous walkway, pergolas and decorative elements such as flambeau.

Policy 4.1.4

Ensure that future additions to the Physics School

- *do not obscure but complement the complex three dimensional form of the original building;*
- *are of a similar high standard of design and detailing to each facade as the original building;*
- *respect the original symmetrical composition of each elevation.*

Policy 4.1.9

Remove the rear shed and construct a courtyard at ground level as originally intended. Ensure that the lightwell and drainage is continually maintained.

Policy 4.1.10

Maintain the drains in the lightwells and under the building to ensure the building does not flood or be damaged by water. Maintain the ventilation provided via the lightwells.

Policy 4.1.11

Retain the works compound as a service area including

- *Lowering the ground level above the works compound retaining wall and ensure the upper level is well drained*
- *Review and rationalise the use of the compound and access to storage spaces.*
- *Review the location of the substation and lines from it.*
- *Aim to providing better utilisation of storage spaces*
- *Consider the need for fire egress in the area*

Policy 4.1.12

Additions to the exterior of the building are to be carefully designed down to the smallest detail.

Policy 4.2.1

Future designs for additions and alterations should respect the symmetry of the original composition of the Physics Building.

Policy 4.2.2

Ensure that the impact on the symmetry of the building of proposed additions is assessed using photomontages and distance views.

Policy 4.3.1

Undertake a detailed accommodation survey, to assess the number of individual offices required in the building and the current level of usage of the existing offices. It may be more appropriate to construct purpose built offices in a separate wing.

Policy 4.3.2

Ancillary spaces, toilets, fire stairs and areas with sophisticated technical requirements should be incorporated in areas identified as having little or no significance in order that they can be progressively upgraded without impact on significant fabric. It may be more appropriate to locate some or all of these needs in an extension or within a new building.

Policy 4.5.2

Consider the replacement of the Annex with a new high-tech research facility, relocating functions whose technical requirements do not change at such a rapid rate (such as the library or museum) from the present Annex into the double height spaces of the main building.

Policy 4.7.3

Additional offices could be provided in a new purpose built annex.

Policy 5.2.1

Continue to utilise the Physics School for the teaching of Physics.

Policy 5.3.2

Future additions to the building should respect both Wilkinson's design intentions, the symmetry of the composition and its picturesque massing. Such elements should be carefully designed, including a roof form that complements the skyline of the building when viewed from the north and from the south.

Policy 5.3.3

Additions should have regard to the design of the building to be viewed from all sides and should create pleasant exterior spaces that relate to the existing and new, such as the originally intended south courtyard.

Policy 5.3.4

Light levels within the main staircase and vestibule should not be diminished by additions to the building.

6.7 Edward Ford Building and Animal House Conservation Management Plan

The proposal includes landscape works to an area defined in the *Edward Ford Building and Animal House University of Sydney (Conservation Management Plan) CMP* as part of its setting. The *CMP* contains the following policies considered applicable to development of the subject site:

Policy 5:

The extent of the significance fabric should be identified as:

- *The landform of the place*
- *All of the landscape, vegetation, buildings contents and site features introduced to the place prior to 1987*
- *The subsurface remains (archaeology) of former landscape, vegetation and buildings, contents and site features introduced prior to 1987*
- *The occupational deposits (archaeology) beneath and around the above introduced to the place prior to 1987.*

Policy 7:

The following fabric should be retained and conserved:

- *All significant fabric introduced prior to completion of the 1957 wing*
- *All fabric recorded in this report as previous reconstructions*
- *All fabric reconstructed (in the future) in accordance with these policies.*

Policy 12:

The following views (V) to the place should be conserved:

- *V12 View south toward the Wisteria Garden and jacaranda tree, with subject building on the left and Physics Building on the right*
- *V21 View of west elevation from Physics Building carpark*
- *V27 Glimpse into courtyard from west*
- *V28 Vista through vehicle archway to east face Physics Building*

The following views (V) to the place should be conserved:

- *View from the western vehicle archway to Physics Building*

Policy 26:

Adaptation of parts of the landscape and vegetation in accordance with the following table and Figure 6.2 is appropriate: CM Conserve identified items as per this policy

- *Other intervention and adaptation allowed in this policy*
- *Minor structure appropriate*
- *No other alterations appropriate*

Policy 41:

Works within the setting of the place and at associated places, particularly on the boundary of the place should, if possible, be controlled to minimise visual intrusion.

6.8 St Paul's College Conservation Management Plan

The *St Paul's College University of Sydney Conservation Management Plan (CMP)*, identifies that part of the subject site that is currently within the boundaries of the St Paul's College grounds as an area capable of University Development. It notes the following in relation to the character of the St Paul's College site:

the character of St Paul's College is clearly collegiate, of a domestic scale and based around quadrangles set against open grounds, with large trees framing buildings and lining boundaries. There is a clear definition between the two zones; the built zone and the open grounds zone, which relate to the original planning of the site and retain elements of the original picturesque concepts at play on the site.

Policy 3: The character of the place should be identified as having the following principle characteristics:

- Collegiate
- Domestic scale
- Built form centred on Quadrangles
- Independent character from the University
- Clear delineation between the building groups to the west of the site and the open grounds to the east of the site
- Boundaries planted out with trees

6.9 NSW Heritage Manual

The *NSW Heritage Manual* was published by the Heritage Office (now the Heritage Branch of the Office of Environment and Heritage) and the Department of Urban Affairs in 1996, as the primary reference document for heritage management in NSW. The relevant guidelines relating to the assessment of heritage impact are *Altering Heritage Assets* and *Statements of Heritage Impact*. The relevant 'questions to be answered' in the *NSW Heritage Manual* 'Statements of Heritage Impact' guidelines considered in the preparation of this report are:

Minor Partial Demolition

- *Is the demolition essential for the heritage item to function?*
- *Are important features of the item affected by the demolition (e.g. fireplaces in buildings)?*
- *Is the resolution to partially demolish sympathetic to the heritage significance of the item?*
- *If the partial demolition is a result of the condition of the fabric, is it certain that the fabric cannot be repaired?*

Major Additions

- *How is the impact of the addition on the heritage significance of the item to be minimised?*
- *Can the additional area be located within an existing structure? If no, why not?*
- *Will the additions tend to visually dominate the heritage item?*
- *Are the additions sited on any known, or potentially significant archaeological deposits? If so, have alternative positions for the additions been considered?*
- *Are the additions sympathetic to the heritage item? In what way (eg form, proportions, design)?*

New Development Adjacent to a Heritage Item

- *How is the impact of the new development on the heritage significance of the item or area to be minimised?*
- *Why is the new development required to be adjacent to a heritage item?*
- *How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?*
- *How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?*
- *Is the development sited on any known, or potentially significant archaeological deposits? If so, have alternative sites been considered? Why were they rejected?*
- *Is the new development sympathetic to the heritage item? In what way (e.g. form, siting, proportions, design)?*
- *Will the additions visually dominate the heritage item? How has this been minimised?*
- *Will the public, and users of the item, still be able to view and appreciate its significance?*

New Landscape Works and Features

- *How is the impact of the new development on the heritage significance of the existing landscape been minimised?*
- *Has evidence (archival and physical) of previous landscape work been investigated? Are previous works being reinstated?*
- *Has the advice of a consultant skilled in the conservation of heritage landscapes been sought? If so, have their recommendations been implemented?*
- *Are any known or potential archaeological deposits affected by the landscape works? If so, what alternatives have been considered?*
- *How does the work impact on views to, and from, adjacent heritage items?*

Assessment of Heritage Impact

7.0

7.1 Introduction

The assessment in this section considers the requirements and guidelines documented in the previous section to provide a detailed analysis of the statutory controls and guidelines applying to this site, with regard to heritage. The analysis focuses on the policies of the applicable conservation management plans which generally cover the relevant 'questions to be answered' in the *NSW Heritage Manual* 'Statements of Heritage Impact' guidelines and the statutory considerations.

7.2 Siting and Design of the New AIN Building

The subject site is located at the interface of the University of Sydney Camperdown Campus and St Paul's College. The alignment of Physics Road reflects the original development of the university and later phases of its planning. The Physics Building (A28) and the Physics Annex (A29) to its south (approved for demolition as part of a separate application) are both sited on land that formerly belonged to St Paul's College.

7.2.1 View Considerations

The form of the Physics Building, designed by the University Architect Leslie Wilkinson, was influenced by his 1920 grounds development plan that sought to create and/or preserve the vistas from St Paul's College across Hockey Square to the Union and to the entrance to the university on Parramatta Road.

Subsequent development within both the St Paul's College grounds and the university has eroded this vista. Rather than being a formal axis it is now a series of vistas from points along the axis. The most significant of these is noted in the *Grounds CP* as vista V5, *view along Hockey Square Axis, the axial vista from in front to the Physics Building (A28) across Hockey Square along the access leading to the Union Refectory (A09)*. It is noted in the *Grounds CP* that the terminal view is obscured by mature vegetation. The photographs in Figure 7.1 indicate this occurred during or after the 1960s. The images in Figure 7.1, sourced from the *School of Physics CMP*, include a drawing that shows the intended view to St Paul's College.

The siting of the new AIN Building at the rear of the Physics Building is considered to be consistent with the policies of the *Grounds CP*, in particular Policies 4, 8 and 17. Its location is sympathetic to the adjacent buildings and open spaces, and it retains the historic alignment of Physics Road and the significant vistas along the Hockey Square axis.

The photomontage in Figure 7.2, prepared as part of this application, shows the proposed AIN Building will not interrupt this vista, V5 identified in the *Grounds CP*, and the Physics Building will remain visible from the main cross axis.



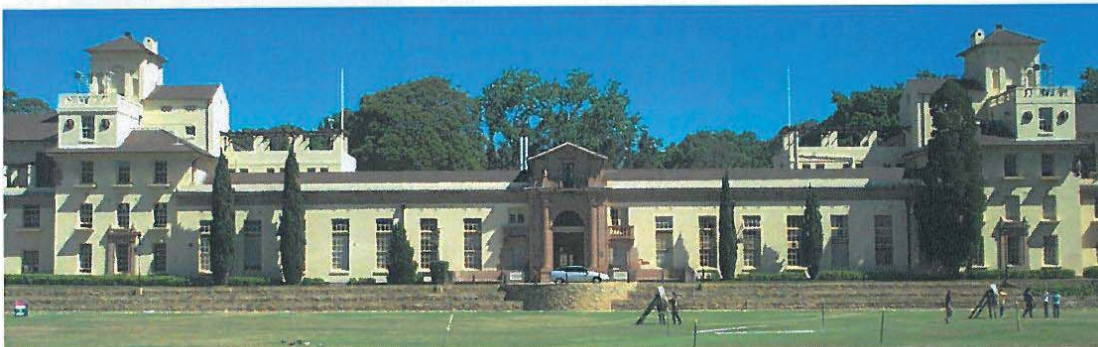
PRESENTATION DRAWING



1947



1958



2004

Figure 7.1

Images included in the *School of Physics CMP* as part of the discussion of the changes to the significant plantings along the front of the buildings. The drawing at the top shows the intended view to St Paul's College. The later photographs indicate the termination of this view, by the mature planting behind the Physics Building, occurred during or after the 1960s.



Figure 7.2

Photomontage of the partial view of the Wilkinson axis referred to as V5 in the *Grounds CP*. It shows the proposed development will be seen as a background in views to Physics building. It should be noted that the trees seen immediately behind the centre of the Physics Building are to be removed as part of the early works which is the subject of a separate application.

Source: architectus



Figure 7.3

Photomontage of the same aspect showing the development at St Paul's College proposed as part of SSD 5313

Source: SSD 5313 documentation accessed on the Department of Planning and Infrastructure website

The *University of Sydney Grounds CP* contains the following policies, relating to views, considered applicable to development of the subject area.

University of Sydney Grounds CP Policy	Comment
Policy 8 Retention and maintenance of vista and views and the settings of significant buildings <i>FMO should protect the lines of vista and views identified in this report. Maintenance would involve the judicious pruning or removal of encroaching vegetation, and the maintenance of framing vegetation and other landscape and built elements. The siting and design of new buildings, planting and other grounds features should be limited so as not to obscure or otherwise reduce significant views, vistas, or other heritage values.</i>	This policy implies that the vegetation obscuring the view to St Paul's, from the University, along the Wilkinson axis, should be removed. Analysis of the impact on the identified significant views is included below in the comments on the <i>School of Physics CMP</i> policies.
Policy 16 New developments or changes to existing buildings or grounds features to respect heritage significance <i>The conservation of significant components and values of the grounds should be ensured before any new building or grounds developments or changes to existing buildings are approved. Other policies deal with the conservation of significant components and values.</i>	The site of the proposed AIN Building, at the rear of the Physics Building (A28), is not identified as an area of significance in the <i>Grounds CP</i>.
Policy 17 Relate new buildings to heritage buildings, spaces and views <i>Ensure that the design and orientation of new or altered buildings and other developments are sympathetic to significant buildings, open spaces, views and vistas, and the historical planning framework.</i>	The proposed new building is considered to be sympathetic to the adjacent heritage items, significant open spaces of the university grounds and the identified significant views, vistas and planning framework. Further discussion of the impact on views and vistas and the historic planning is included below in the comments on the <i>School of Physics CMP</i> policies.
Policy 20 Overall primary use of the grounds <i>The grounds should continue to be used for University purposes including teaching and research, and to provide support services and passive and active recreational amenities for the University community.</i>	The proposed development is consistent with this policy.
Policy 22 Conservation of significant uses <i>Particular parts of the grounds should be used in ways which help conserve and interpret their heritage significance.</i> • <i>Science, Manning and Physics, Fisher Roads, and adjacent curtilage - pedestrian use and low key, short term university activities, (vehicular use of roads acceptable, but not essential to significance)</i> • <i>s.170 Register buildings - uses that retain traditional scale of occupation, conserve significant fabric, and retain important associated elements of the grounds, views and vistas</i>	The siting of the new AIN Building at the rear of the Physics Building will ensure the on-going use of the Physics Building for its intended purpose with minimal change to the physical fabric of the building. The building has been designed to retain and respect the identified significant views and important elements of the grounds.

The *School of Physics CMP*, prepared in 2005, recognised that there is likely to be a need for additional space for the faculty and that this could be provided in a new wing at the rear of the building. This would require acquisition of land owned by St Paul's College. The *CMP* has a number of policies relating to views that need to be considered in the assessment of the proposed development. These are evaluated in the following table using the photomontage for reference.

School of Physics CMP Policy	Comment
Policy 2.1.1 <i>Retain the overall character of the university campus by retaining the vistas intended by Wilkinson in his 1920 plan.</i>	The <i>School of Physics CMP</i> notes the following vistas intended in the 1920 Wilkinson plan: • The cross axis on the northern side of Science Road across the Hockey Field to the spire of St Paul's College beyond. • The view from the Tennis Pavilion through the centre of the building • The series of views of the northern facade of the Physics Building commencing at Fisher Road, framed initially by the 1950s extensions to the School of Tropical Medicine (Edward Ford Building) • View from the roof of the Physics Building looking back to the university campus Wilkinson's design for the Physics Building included the retention of a view to and from St Paul's College with the lowered central form of the building. Although this formal axis is now a series of vistas from points along the axis rather than the original planned axis the form of the proposed AIN Building has been designed to respect the Wilkinson design concept. The proposed building will be seen in views from the Tennis Pavilion which currently includes views to the Physics Annex (A29). This minor change to the view composition is considered to be an acceptable heritage impact. Views to the Physics Building when approaching along Physics Road and those to the university campus from the Physics Building roof will not be adversely impacted by the proposed development at the rear of the Physics Building.

Policy 2.1.2 <i>Ensure that the major cross axis that extends from the northern side of Science Road (the refectory) through the University Grounds to St Paul's College beyond is retained in future campus master plans and in schemes for additional buildings.</i>	The establishment of this cross axis was a major concept of the 1920 Wilkinson Plan and as such the form of the Physics Building was deliberately lowered in the centre to retain a view to St Paul's. Rather than being a formal axis this is now a series of vistas from points along the axis as the original planned axis has been interrupted by the construction of additions to St Paul's College and buildings on the southern side of Science Road, including the Bank Building, relocated by Wilkinson himself. The photomontage prepared as part of this application show this conceptual cross axis is to be retained by lowering the building component behind the centre of the Physics Building which is aligned in this axis.
Policy 2.1.3 <i>Liaise with St Paul's College regarding the improvement of the vistas back across the university grounds, including pruning trees that currently substantially obscure the vista of the college from within the University Grounds.</i>	The project team liaison with St Paul's College has included discussion on the future expansion of the college. St Paul's College has provided the data to allow their proposed future buildings to be shown on the plans accompanying this application. The initial concept plans for the AIN Building presented to St Paul's College by The University of Sydney were modified following discussion of impacts on the vistas from within the college grounds. The St Paul's College Masterplan, submitted to the Department of Planning as part of SSD 5313, shows the proposed development at the northern edge of the St Paul's College site will frame the views from within the college grounds. Views from the College to the University will largely be limited to those available from within the proposed new buildings.
Policy 2.1.4 <i>Use photomontages to assess the impact on vistas of proposed additions such as lift towers and the impact of sheds to rear of Physics Building.</i>	The photomontage shows the proposed AIN Building has been designed to respect the early Wilkinson design concept. The western wing of the building has a symmetrical presentation behind the central section of the Physics Building with a lowered section interpreting the cross axis that featured in the Wilkinson plan. It is noted that the proposed development at St Paul's College (SSD 5313) will be seen as a background element in the same view, and that the St Paul's College Graduate House building has a RL above that of the AIN Building, along the Wilkinson axis. The eastern wing of the proposed AIN Building will be seen behind the Physics Building in some views from within the University and St Paul's College grounds. This is not considered to be an adverse impact.

Policy 2.1.5 <i>Seek to ensure that the Physics building remains visible from all points along the main cross axis, the surviving portion of the second view line and as you move east or west along Physics Road.</i>	As noted above, the form of the proposed AIN Building has been designed to respect the Wilkinson design concept and retain the series of axial views to the south that are currently available. The planned view to the north along this axis, from St Paul's College, is now obscured by current and planned additions to St Paul's College. Views of the Physics Building, as you move east or west along Physics Road, will not be impacted by the proposed development.
Policy 2.1.6 <i>Ensure any future additions to the Physics building (including alterations to, or replacement of the Annex) are designed considering the significant vistas, as have been identified in the University of Sydney Grounds Conservation Plan, Volume 1, namely:</i> • The Refectory to St Pauls Cross Axis • The view southwest from the Manning Building terrace • The views from the loggia to the Tennis pavilion • The view as you move west along Physics Road	The view analysis prepared as part of this application shows these views will be retained.
Policy 2.1.7 <i>Ensure that Statements of Heritage Impact include an assessment of the impact on the significant vistas. Ideally this impact should be assessed using photomontages</i>	The photomontage prepared as part of this application have been included in this Statement of Heritage Impact. The view impacts are considered to be acceptable from a heritage perspective.
Policy 2.1.8 <i>Retain the central lowered portion of the building that was specifically designed to retain the view of St Paul's College tower. Elements that project beyond the roofline in this area should not be permitted if they can be seen in either of the two main lines of sight.</i>	The form of the proposed AIN Building has been designed to retain the conceptual view of St Paul's College tower. The roofline of the proposed building will not be seen in the line of sight looking south to the Physics Building, and beyond. The exhaust stack elements that will be visible retain the conceptual view line and are considered to be acceptable. This will have no adverse impact on the primary presentation of the Physics Building to Physics Road. The view north over the Physics Building from the front of the St Paul's College tower is obscured by the intervening St Paul's College buildings.
Policy 4.2.2 <i>Ensure that the impact on the symmetry of the building of proposed additions is assessed using photomontages and distance views.</i>	The photomontage in Figure 7.2 shows the symmetry of the central portion of the Physics Building is retained with the design of the western component of the proposed development centred on a courtyard behind the Physics Building.

The *St Paul's College University of Sydney Conservation Management Plan (CMP)*, identifies that part of the subject site that is currently within the boundaries of the St Paul's College grounds as an area capable of University Development. Policy 3 of this *CMP* notes the character of St Paul's College should be independent from that of the University. The design of the AIN Building is consistent with this policy, demonstrating a clearly contemporary design language consistent with that of the twenty-first century buildings of the university campus.

Views to and from St Paul's College

There are no readily available views to St Paul's College from the public road network, within the university campus, through the subject site. The current view to St Paul's from the subject site itself is largely screened by the topography and the established vegetation within the St Paul's College grounds. It will be further obscured by the new buildings that are planned for construction at the northern edge of the college grounds.

Policy 4 of the *Grounds CP* notes that new development should be planned to retain or reinforce the historic planning framework, including the St Paul's / Refectory axis. This has been considered in the design of the new AIN Building which has limited the height along this axis.

As part of the subject site is located within the St Paul's College grounds the relevant policies of the *St Paul's College University of Sydney CMP* are considered in this assessment. The *CMP* notes there is an historic visual relationship between St Paul's College and the Main Quad of the University of Sydney to its north east. It contains the following policy relating to these views:

Policy 11: The following views to the place should be conserved as shown in figures 2.27 and 4.4:

- *Views from City Road and the University of Sydney to the east elevations of the college buildings*
- *Views from the Tower Block to the Main Quadrangle of the University of Sydney*

The proposed AIN Building will have no adverse impact on these views and is therefore consistent with this policy.

The college grounds contain areas of formal and informal landscaped open spaces, with one of the most picturesque being the sports oval. The site of the proposed works is considered to be a secondary space in comparison to other spaces of the college grounds. The proposed development will not be readily visible from St Paul's College oval. It will have no adverse impact on the setting of the St Paul's College buildings or on the aesthetic presentation of its primary open spaces and overall setting.

It is noted that the Graduate House and Library buildings proposed for St Paul's College in SSD 5313 will effectively screen the subject site from the St Paul's college grounds.



Figure 7.4
The picturesque setting of St Paul's College oval and views to the University of Sydney from within the College grounds will not be adversely affected by the proposed development

Views to and from the Edward Ford Building and Animal House

The primary views to the Edward Ford Building and the Animal House are from Fisher Road, with views to the later addition to the Edward Ford Building also being available from Physics Road. These views will not be affected by the proposed development.

Policy 12 of the *Edward Ford Building and the Animal House CMP* notes the following views to and from the rear of the Edward Ford Buildings should be conserved:

- *V12 View south toward the Wisteria Garden and jacaranda tree, with subject building on the left and Physics Building on the right*
- *V21 View of west elevation from Physics Building carpark*
- *V27 Glimpse into courtyard from west*
- *V28 Vista through vehicle archway to east face Physics Building*

It is noted that the jacaranda tree mentioned in V12 is no longer extant, and that the wisteria garden was severely damaged when the jacaranda fell down.

The proposed AIN Building and the site landscaping will not have an adverse impact on these views.



Figure 7.5
V12, looking south to the location of the wisteria garden and former site of the jacaranda tree and pergola



Figure 7.6
V21, view to the west elevation of the Edward Ford Building from the Physics carpark, prior to the loss of the jacaranda tree and pergola



Figure 7.7
V27, view to the courtyard from the west, prior to the loss of the jacaranda tree and pergola



Figure 7.8
V28, view to the east face of the Physics Building

7.2.2 Evaluation of the Design Impacts

The *School of Physics CMP* has a number of policies relating to views that need to be considered in the assessment of the proposed development. These are evaluated in the following table.

School of Physics CMP Policy	Comment
Policy 2.2.1 <i>Ensure future proposals for the Wilkinson designed buildings, the Physics Building, the School of Tropical Medicine, the R. C. Mills Building and the Tennis Pavilion respect the intended Mediterranean character, which contributes to the townscape of this part of the Campus.</i>	The proposed new AIN Building is sited at the rear of the Physics Building and will only be seen as a background element. It will not affect the Mediterranean character of the group of Wilkinson designed buildings, or the townscape, in this part of the university campus.
Policy 4.1.1 <i>Continue the tradition of university buildings that are designed with four high quality elevations.</i>	The proposed AIN Building has been designed with four high quality elevations with the facade treatment influenced by the technical requirements of the building interiors.
Policy 4.1.2 <i>Conserve the surviving evidence of the original external form of the Physics Building, including the continuous walkway, pergolas and decorative elements such as flambeau.</i>	Part of the continuous walkway is to be removed to construct the eastern link from the new AIN Building to the Physics Building. This is discussed below in the section detailing the impacts of the interface with the Physics Building.
Policy 4.1.4 <i>Ensure that future additions to the Physics School</i> - do not obscure but complement the complex three dimensional form of the original building; - are of a similar high standard of design and detailing to each facade as the original building; - respect the original symmetrical composition of each elevation	Although this <i>CMP</i> recognised that a new wing may be constructed at the rear of the Physics Building, on land acquired from St Paul's, it does not appear to have envisaged the extensive facilities that are now required. It is not possible to construct the specialised research and learning facility required in the space available without obscuring some part of the three dimensional form of the Physics Building. The proposed new AIN Building is a clearly contemporary building of high quality design and detailing, consistent with the requirements of this policy.
Policy 4.1.4 continued <i>Ensure that future additions to the Physics School</i> respect the original symmetrical composition of each elevation	The glazed links between the new AIN Building and the Physics Building have been designed to retain views to the rear of the Physics Building and create a southern courtyard aligned with the Wilkinson axis. Although the siting constraints do not allow for a symmetrical composition of the new AIN Building as a whole, the western component of the building has a symmetrical presentation, centred on the Wilkinson axis.

Policy 4.1.9 <i>Remove the rear shed and construct a courtyard at ground level as originally intended. Ensure that the lightwell and drainage is continually maintained.</i>	A courtyard, centred on the Wilkinson axis, is to be created in this location. Maintaining light and effective drainage have been addressed as part of the overall design and are considered to be consistent with this policy.
Policy 4.1.10 <i>Maintain the drains in the lightwells and under the building to ensure the building does not flood or be damaged by water. Maintain the ventilation provided via the lightwells.</i>	Flooding and drainage have been addressed as part of the overall design and are considered to be consistent with this policy.
Policy 4.1.11 <i>Retain the works compound as a service area including:</i> • <i>lowering the ground level above the works compound retaining wall and ensure the upper level is well drained</i> • <i>review and rationalise the use of the compound and access to storage spaces</i> • <i>review the location of the substation and lines from it</i> • <i>aim to providing better utilisation of storage spaces</i> • <i>consider the need for fire egress in the area</i>	The proposed development rationalises the service areas, substation and storage spaces, consistent with this policy.
Policy 4.1.12 <i>Additions to the exterior of the building are to be carefully designed down to the smallest detail</i>	The proposed new building will have two links to the Physics Building. The design of the link interface with the Physics Building has been carefully detailed in consultation with Heritage Consultants, Graham Brooks and Associates.
Policy 4.2.1 <i>Future designs for additions and alterations should respect the symmetry of the original composition of the Physics Building.</i>	Although the available space does not allow the required facilities to be provided in a symmetrical addition to the Physics Building the design of the new building respects this symmetry by aligning the internal courtyard that separates the two buildings with the centre of the Physics Building, giving a perception of symmetry from within.
Policy 4.3.1 <i>Undertake a detailed accommodation survey, to assess the number of individual offices required in the building and the current level of usage of the existing offices. It may be more appropriate to construct purpose built offices in a separate wing.</i>	The University of Sydney has undertaken a detailed accommodation survey as part of the planning for the building and has included purpose built offices in the new AIN Building.
Policy 4.3.2 <i>Ancillary spaces, toilets, fire stairs and areas with sophisticated technical requirements should be incorporated in areas identified as having little or no significance in order that they can be progressively upgraded without impact on significant fabric. It may be more appropriate to locate some or all of these needs in an extension or within a new building.</i>	The proposed new building will provide specialist laboratories, teaching and office spaces, allowing the significant spaces and fabric of the Physics Building to remain unaltered.

Policy 4.5.2 <i>Consider the replacement of the Annex with a new high-tech research facility, relocating functions whose technical requirements do not change at such a rapid rate (such as the library or museum) from the present Annex into the double height spaces of the main building.</i>	The proposed new science research and education facility is consistent with this policy.
Policy 4.7.3 <i>Additional offices could be provided in a new purpose built annex.</i>	The proposed new building is to contain additional offices.
Policy 5.2.1 <i>Continue to utilise the Physics School for the teaching of Physics.</i>	The specialised facilities to be provided in the AIN Building will ensure the continued use of the adjacent Physics Building for the teaching of Physics.
Policy 5.3.2 <i>Future additions to the building should respect both Wilkinson's design intentions, the symmetry of the composition and its picturesque massing. Such elements should be carefully designed, including a roof form that complements the skyline of the building when viewed from the north and from the south.</i>	The new science research and education facility is to be provided in a separate new building linked to the Physics Building. The siting constraints do not allow for a symmetrical composition of the new AIN Building. However it has been designed to allow the central portion of the Physics Building, constructed on the Wilkinson axis, to be read against the skyline when viewed from the north. The loss of the limited views to the roof from of the Physics Building when viewed from the south is considered to be acceptable.
Policy 5.3.3 <i>Additions should have regard to the design of the building to be viewed from all sides and should create pleasant exterior spaces that relate to the existing and new, such as the originally intended south courtyard.</i>	As noted above, it is not possible to construct the specialised research and learning facility required in the space available without obscuring some views to the rear of the Physics Building. The impact of this partial loss of view to the rear of the building is considered to be minor. It has been minimised by the design of the glazed links between the new AIN Building and the Physics Building. A new southern courtyard is to be created, as intended.
Policy 5.3.4 <i>Light levels within the main staircase and vestibule should not be diminished by additions to the building.</i>	The addition of a glazed link between the Physics Building and the new AIN Building is unlikely to diminish light levels within the main staircase and the vestibule.

7.2.3 Interface with the Physics Building

The proposed development includes the removal of the remnant interface between the Physics Building and the Physics Annex and the construction of two lightweight transparent glazed structures linking the Physics Building and the new AIN Building. Some changes are also required to the Physics Building to satisfy the requirements for fire separation between the two buildings.

The east link will connect the two buildings across all three levels. The existing openings on levels one (ground) and two, that provided access to the Physics Annex link, will be reused and fitted with new fire doors. On level three an existing window will be removed, the opening extended to floor level and a new fire door inserted. This will require a section of the external walkway to be removed.

Any conservation works required to make good the rendered surfaces where the Physics Annex interface and external walkway brackets are removed will match the material and finish of the existing.

The west link connects the two buildings on two levels. Four windows in the south elevation of the Physics Building, will be removed, the openings extended to floor level and fitted with fire doors. Minor changes are required to restore the original floor level at the junction of the Physics Annex interface on level two. The fabric to be removed is not original and overall is considered to be a positive heritage impact.

The lightweight transparent glazed structures of the link elements have been designed to touch the Physics Building lightly and minimise physical impacts. The physical connections are limited to the attachment of the small glass roof elements above the interface with the link components and the junctions of glass facade of the link components and the Physics Building.

This junction requires a small section of the rendered surface of the Physics Building to be removed to insert the glass. Additionally, a slice of the external walkway will also need to be removed. This option has been chosen over surface mounting to provide a superior aesthetic resolution to this junction. Although it does impact on significant building fabric, it is essentially reversible.

The changes required to the Physics Building to satisfy the requirements for fire separation between the two buildings, in the vicinity of the links, include:

- relocation of air conditioning vents
- the retrofitting of fire rated construction to the inside face of window openings after the application of a black film to the inside face of the glazing
- retrofitting fire rated glazing to the inside face of wall openings
- retrofitting fire damper to mechanical equipment
- retrofitting fire rated doors to existing openings
- removal of windows and doors and their replacement with fire rated door sets.

The fire separation strategy was developed combining various options to minimise the impact on the significant fabric of the Physics Building. Original fabric removed is to be tagged and stored for conservation purposes.



Figure 7.9
Photograph of the southern facade of the Physics Building showing the location of the proposed eastern link to the new AIN Building



Figure 7.10
Photograph showing the building facades in the vicinity of the proposed eastern link where works are to be undertaken to comply with the fire separation requirements. The existing link to the Physics Annex has been approved for demolition as part of a separate application, with the exception of the remnant interface to the Physics Building

7.3 The Proposed Landscaping

The site landscaping includes changes to the area adjacent to the rear of the Edward Ford Building (A27). The fig tree in this area is included on the *City of Sydney Register of Significant Trees*. The aim of the Register is to identify and recognise the importance of significant trees in the City's changing urban landscape. It has been developed by the City of Sydney to help guide the management of these trees and to ensure their continued protection for the benefit of the community and for future generations. These trees are considered to be integral parts of the City's historic, cultural, social, aesthetic and botanical heritage.

This tree is to be retained.

The jacaranda tree at the rear of the Edward Ford Building, that fell down in a storm in June 2012, was also included on the *City of Sydney Register of Significant Trees*.

The following table comments on the proposed landscaping changes in relation to the relevant policies of the applicable Conservation Management Plans.

University of Sydney Grounds CP Policy	Comment
Policy 9 Maintain and protect plantings with significant attachment to particular buildings <i>Some plantings close to particular buildings were associated with the original design of the buildings, or have subsequently become an important part of the building's setting. Where such plantings and related buildings are shown to have associations of heritage significance, the plantings should, where feasible, be maintained. .</i>	There are no known significant attachments associated with the plantings within the subject area. The wisteria garden at the rear of the Edward Ford Building, which is an area subject to change as part of this application, dates from the 1980s.

Policy 10 Where new planting or landscape features are to be developed, they should be planned so as to conserve or reinforce heritage values of the related building, spaces and views. This should extend to the selection of plant species, grouping and massing of planting, the appropriate design of fencing, road surfacing and hard landscaping.	The landscaping between the Edward Ford Building and the Physics Building has been revised to provide better shared pedestrian and vehicle access. These works include the partial removal and realignment of the sandstone wall that formerly featured a pergola supported on sandstone columns. The final plant selection for this area should include flowering climbers to reinforce the character of the adjacent Mediterranean style, Wilkinson designed buildings.
Policy 13 Design road and parking to be compatible with heritage significance Road design, traffic flow rates, and parking areas should be designed to minimise conflict with the conservation and appreciation of heritage features, vistas and views.	The proposed shared pedestrian and vehicle access allows for the continued appreciation of the heritage features and views in the area.
School of Physics CMP Policy	Comment
Policy 2.2.3 Seek to re-instate a landscaped pedestrian courtyard between the former School of Tropical Medicine and the School of Physics incorporating the pergola and the surviving plantings. Relocate unsightly functions such as garbage dumpsters whilst improving delivery access.	The proposal includes a revision of the landscaping between the former School of Tropical Medicine (Edward Ford Building) and the School of Physics to provide shared pedestrian and vehicle access, including delivery trucks. Reinstatement of the earlier pergola is not considered feasible as the space must allow access for delivery trucks. The unsightly functions that are present in this area are to be removed.
Edward Ford Building and Animal House University of Sydney CMP	Comment
Policy 26: Adaptation of parts of the landscape and vegetation in accordance with the following table and Figure 6.2 is appropriate: CM Conserve identified items as per this policy • Other intervention and adaptation allowed in this policy • Minor structure appropriate • No other alterations appropriate	The proposed landscaping at the rear of this building includes the partial removal and realignment of the sandstone wall that formerly featured a pergola supported on sandstone columns and the construction of a bridge link to the St Paul's college grounds. These changes are considered to be consistent with this policy.
Policy 41: Works within the setting of the place and at associated places, particularly on the boundary of the place should, if possible, be controlled to minimise visual intrusion.	The landscaping referred to above is located within the setting of the Edward Ford Building, as identified in this CMP. It is considered to be acceptable and appropriate in relation to this policy, subject to the recommendation that the final plant selection for this area include flowering climbers to reinforce the character of the adjacent Mediterranean style, Wilkinson designed buildings.

7.4 Evaluation of the Impact on Sydney University Conservation Area

The proposed AIN Building is an addition to the Sydney University Conservation Area which is listed as a conservation of local heritage significance under the *South Sydney LEP 1998* and the *Draft Sydney LEP 2011*. The impact of this addition has been minimised by the siting of the new building at the edge of the University campus, between the rear of the Physics Building and the proposed St Paul's residential development. Furthermore, the design of the building form has considered the historic layout of the university and the resulting views.

The new building includes specialist research laboratory spaces including Precision Metrology Laboratories, Transmission Electron Microscope suites, cleanrooms, high performance electronics and optics laboratories that must be purpose built and cannot be provided within the existing university buildings. To retain the on-going viability and use of the Physics Building for its intended purpose it is essential that these facilities be co-located with the Physics Building.

The proposed AIN Building has a relatively low form and is to be sited between the Physics Building and the new residential development at the northern edge of the St Paul's College grounds. While the available space does not allow the required facilities to be provided in a symmetrical addition to the Physics Building, the design of the new building respects this symmetry by aligning the internal courtyard that separates the two buildings with the centre of the Physics Building, giving a perception of symmetry from within.

Although it will not be a visually dominant element in the conservation area the AIN Building is to be a clearly contemporary element of the university campus, consistent with the layer of twenty-first century development being added to the conservation area. Thus the siting and design of the AIN Building is considered to be sympathetic to the conservation area.

The proposed building will reinforce the historic significance of the university which has continually expanded the institutional uses on the site since its establishment in the 1850s. There will be no adverse impact on the evolving cultural landscape of the university or the aesthetic significance of the buildings within it.

7.5 Constructional and Operational Impacts on Adjoining Heritage Items

The documents submitted with this application include a plan showing the proposed hoarding and fencing lines to be erected for the construction phase of the development. It is recommended that the Construction Management Plan include details of the protection measures to be undertaken to ensure there is no unforeseen damage to the adjacent heritage buildings and the significant tree that is to be retained.

7.6 Proposed Conservation and Mitigation Measures

It is recommended that the following conservation and mitigation measures be included in the development approval:

- A requirement that any original fabric removed from the Physics Building be tagged and stored for future conservation purposes.
- The appointment of an experienced heritage consultant to work with the consultant team throughout the design development, contract documentation and construction stages of the project to resolve all matters that involve changes to, or removal of, existing significant fabric.
- Refinement of the landscaping design to include the selection of flowering climbers for the space at the rear of the Edward Ford Building and that consideration be given to reusing the stone pillars, removed following the collapse of the jacaranda tree, in this area.
- A requirement that the sandstone from the wall at the rear of the Edward Ford Building is salvaged and reused, with any excess to be tagged and stored for future landscaping works within the university
- Inclusion of the protection measures to be undertaken to ensure there is no unforeseen damage to the adjacent heritage buildings and significant tree in the Construction Management Plan for the project.
- Preparation of an Archival Photographic Recording of the external and internal areas of the Physics Building that are to be impacted.

Conclusions and Recommendation

8.0

8.1 Conclusions

- The subject site, immediately south of The University of Sydney Physics Building (A28) is located within the Sydney University Conservation Area (CA47) which is listed as a heritage item of local significance in Schedule 2A of the *South Sydney Local Environmental Plan (LEP) 1998* and the *Draft Sydney LEP 2011*.
- Part of the site is also included in the Sydney University Site Landscaping and St Paul's College which are locally listed heritage item in Schedule 2 of the *South Sydney LEP 1998* and the *Draft Sydney LEP 2011*.
- The proposed works are in the vicinity of a number of individually identified heritage items, within and adjacent to the University of Sydney Campus. These include the Physics Building (A28), Edward Ford Building (A27), Animal House (A27A) and St Paul's College.
- As no part of the subject site is included on the NSW State Heritage Register (SHR), or has been nominated for inclusion of the SHR, there is no requirement under the *NSW Heritage Act* to seek approval from the NSW Heritage Council for this application.
- The specialised facilities that are to be provided in the proposed AIN Building will ensure the continued use of the adjacent Physics Building for the teaching of Physics which is considered essential to the retention of its significance.
- The proposed building will reinforce the historic significance of the university which has continually expanded the institutional uses on the site since its establishment in the 1850s.
- It has been designed to respect the historic planning axes within the university and to retain the series of identified significant axial views.
- There will be no adverse impact on the evolving cultural landscape of the university or the aesthetic significance of the buildings within it.
- The modifications to the original fabric of the Physics Building have been minimised and the heritage impacts identified are considered to be within acceptable limits.
- The proposed development is consistent with the heritage requirements and guidelines of the *South Sydney LEP 1998*, the *Draft Sydney LEP 2011*, the *City of Sydney Heritage DCP 2006* and the policies of the applicable Conservation Management Plans.

8.2 Recommendation

- Considering the above, Graham Brooks and Associates recommends the application to the Department of Planning and Infrastructure for approval, subject to the recommended conservation and mitigation measures.

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9.0

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