Appendix 1

Australia ICOMOS Charter for Places of Cultural Significance

The Burra Charter

Considering the International Charter for the Conservation and Restoration of Monuments and Sites (Venice 1964), and the Resolutions of the 5th General Assembly of the International Council on Monuments and Sites (ICOMOS) (Moscow 1978), the Burra Charter was adopted by Australia; ICOMOS (the Australian National Committee of ICOMOS) on 19 August 1979 at Burra, South Australia. Revisions were adopted on 23 February1981, 23 April 1988, and 26 November 1999.

The Burra Charter provides guidance for the conservation and management of places of cultural significance (cultural heritage places), and is based on the knowledge and experience of Australia ICOMOS members.

Articles

Article 1. Definitions

For the purposes of this Charter:

1.1 *Place* means site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces and views.

1.2 *Cultural significance* means aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

Cultural significance is embodied in the place itself, its *fabric, setting, use, associations, meanings,* records, *related places and related objects*.

Places may have a range of values for different individuals or groups.

1.3 *Fabric* means all the physical material of the *place* including components, fixtures, contents, and objects.

1.4 *Conservation* means all the processes of looking after a *place* so as to retain its cultural *significance*.

1.5 *Maintenance* means the continuous protective care of the *fabric* and *setting* of a *place*, and is to be distinguished from repair. Repair involves *restoration* or *reconstruction*.

1.6 *Preservation* means maintaining the *fabric* of a *place* in its existing state and retarding deterioration.

1.7 *Restoration* means returning the existing *fabric* of a *place* to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

1.8 *Reconstruction* means returning a *place* to a known earlier state and is distinguished from *restoration* by the introduction of new material into the *fabric*.

1.9 *Adaptation* means modifying a *place* to suit the existing use or a proposed use.

1.10 *Use* means the functions of a place, as well as the activities and practices that may occur at the place.

1.11 *Compatible use* means a *use* which respects the cultural *significance* of a *place*. Such a use involves no, or minimal, impact on cultural significance.

1.12 *Setting* means the area around a *place*, which may include the visual catchment.

1.13 *Related place* means a *place* that contributes to the *cultural significance* of another place.

1.14 *Related object* means an object that contributes to the *cultural significance* of a *place* but is not at the place.

1.15 *Associations* mean the special connections that exist between people and a *place*.

1.16 *Meanings* denote what a *place* signifies, indicates, evokes or expresses.

1.17 *Interpretation* means all the ways of presenting the *cultural significance* of a *place*.

Conservation Principles

Article 2. Conservation and management

2.1 *Places* of *cultural significance* should be conserved.

2.2 The aim of *conservation* is to retain the *cultural significance* of a *place*.

2.3 *Conservation* is an integral part of good management of *places* of *cultural significance.*

2.4 *Places* of *cultural significance* should be safeguarded and not put at risk or left in a vulnerable state.

Article 3. Cautious approach

3.1 *Conservation* is based on a respect for the existing *fabric*, *use*, *associations* and *meanings*. It requires a cautious approach of changing as much as necessary but as little as possible.

3.2 Changes to a *place* should not distort the physical or other evidence it provides, nor be based on conjecture.

Article 4. Knowledge, skills and techniques

4.1 *Conservation* should make use of all the knowledge, skills and disciplines which can contribute to the study and care of the *place*.

4.2 Traditional techniques and materials are preferred for the *conservation* of significant *fabric*. In some circumstances modern techniques and materials which offer substantial conservation benefits may be appropriate.

Article 5. Values

5.1 *Conservation* of a *place* should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others.

5.2 Relative degrees of *cultural significance* may lead to different *conservation* actions at a place.

Article 6. Burra Charter Process

6.1 The *cultural significance* of a *place* and other issues affecting its future are best understood by a sequence of collecting and analysing information before making decisions. Understanding cultural significance comes first, then development of policy and finally management of the place in accordance with the policy.

6.2 The policy for managing a *place* must be based on an understanding of *its cultural significance.*

6.3 Policy development should also include consideration of other factors affecting the future of a *place* such as the owner's needs, resources, external constraints and its physical condition.

Article 7. Use

7.1 Where the *use* of a *place* is of *cultural significance* it should be retained.

7.2 A *place* should have a *compatible use*.

Article 8. Setting

Conservation requires the retention of an appropriate visual *setting* and other relationships that contribute to the *cultural significance* of the *place.*

New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.

Article 9. Location

9.1 The physical location of a *place* is part of its *cultural significance.* A building, work or other component of a place should remain in its historical location. Relocation is generally unacceptable unless this is the sole practical means of ensuring its survival.

9.2 Some buildings, works or other components of *places* were designed to be readily removable or already have a history of relocation. Provided such buildings, works or other components do not have significant links with their present location, removal may be appropriate.

9.3 If any building, work or other component is moved, it should be moved to an appropriate location and given an appropriate use. Such action should not be to the detriment of any *place* of *cultural significance.*

Article 10. Contents

Contents, fixtures and objects which contribute to the *cultural significance* of a *place* should be retained at that place. Their removal is unacceptable unless it is: the sole means of ensuring their security and *preservation*; on a temporary basis for treatment or exhibition; for cultural reasons; for health and safety; or to protect the place. Such contents, fixtures and objects should be returned where circumstances permit and it is culturally appropriate.

Article 11. Related places and objects

The contribution which *related places* and *related objects* make to the *cultural significance* of the *place* should be retained.

Article 12. Participation

Conservation, interpretation and management of a *place* should provide for the participation of people for whom the place has special *associations* and *meanings*, or who have social, spiritual or other cultural responsibilities for the place.

Article 13. Co-existence of cultural values

Co-existence of cultural values should be recognised, respected and encouraged, especially in cases where they conflict.

Conservation Processes

Article 14. Conservation processes

Conservation may, according to circumstance, include the processes of: retention or reintroduction of a *use*; retention of *associations* and *meanings*; *maintenance, preservation, restoration, reconstruction, adaptation* and *interpretation*; and will commonly include a combination of more than one of these.

Article 15. Change

15.1 Change may be necessary to retain *cultural significance*, but is undesirable where it reduces cultural significance. The amount of change to a *place* should be guided by the *cultural significance* of the place and its appropriate *interpretation.*

15.2 Changes which reduce *cultural significance* should be reversible, and be reversed when circumstances permit.

15.3 Demolition of significant *fabric* of a *place* is generally not acceptable. However, in some cases minor demolition may be appropriate as part of *conservation*. Removed significant fabric should be reinstated when circumstances permit.

15.4 The contributions of all aspects of *cultural significance* of a *place* should be respected. If a place includes *fabric, uses, associations* or *meanings* of different periods, or different aspects of cultural significance, emphasising or interpreting one period or aspect at the expense of another can only be justified when what is left out, removed or diminished is of slight cultural significance and that which is emphasised or interpreted is of much greater cultural significance.

Article 16. Maintenance

Maintenance is fundamental to *conservation* and should be undertaken where *fabric* is of *cultural significance* and its *maintenance* is necessary to retain that *cultural significance.*

Article 17. Preservation

Preservation is appropriate where the existing *fabric* or its condition constitutes evidence of *cultural significance*, or where insufficient evidence is available to allow other *conservation* processes to be carried out.

Article 18. Restoration and reconstruction

Restoration and *reconstruction* should reveal culturally significant aspects of the *place*.

Article 19. Restoration

Restoration is appropriate only if there is sufficient evidence of an earlier state of the *fabric*.

Article 20. Reconstruction

20.1 *Reconstruction* is appropriate only where a *place* is incomplete through damage or alteration, and only where there is sufficient evidence to reproduce an earlier state of the *fabric*. In rare cases, reconstruction may also be appropriate as part of a *use* or practice that retains the *cultural significance* of the place.

20.2 *Reconstruction* should be identifiable on close inspection or through additional *interpretation*.

Article 21. Adaptation

21.1 *Adaptation* is acceptable only where the adaptation has minimal impact on *the cultural significance* of the *place*.

21.2 *Adaptation* should involve minimal change to significant fabric, achieved only after considering alternatives.

Article 22. New work

22.1 New work such as additions to the *place* may be acceptable where it does not distort or obscure the *cultural significance* of the place, or detract from its *interpretation* and appreciation.

22.2 New work should be readily identifiable as such.

Article 23. Conserving use

Continuing, modifying or reinstating a significant *use* may be appropriate and preferred forms of *conservation*.

Article 24. Retaining associations and meanings

24.1 Significant *associations* between people and a *place* should be respected, retained and not obscured. Opportunities for the *interpretation*, commemoration and celebration of these associations should be investigated and implemented.

24.2 Significant *meanings*, including spiritual values, of a *place* should be respected. Opportunities for the continuation or revival of these meanings should be investigated and implemented.

Article 25. Interpretation

The *cultural significance* of many *places* is not readily apparent, and should be explained by *interpretation*. Interpretation should enhance understanding and enjoyment, and be culturally appropriate.

Conservation Practice

Article 26. Applying the Burra Charter process

26.1 Work on a *place* should be preceded by studies to understand the place which should include analysis of physical, documentary, oral and other evidence, drawing on appropriate knowledge, skills and disciplines.

26.2 Written statements of *cultural significance* and policy for the *place* should be prepared, justified and accompanied by supporting evidence. The statements of significance and policy should be incorporated into a management plan for the place.

26.3 Groups and individuals with *associations* with a *place* as well as those involved in its management should be provided with opportunities to contribute to and participate in understanding the *cultural significance* of the place. Where appropriate they should also have opportunities to participate in its *conservation* and management.

Article 27. Managing change

27.1 The impact of proposed changes on the *cultural significance* of a *place* should be analysed with reference to the statement of significance and the policy for managing the place. It may be necessary to modify proposed changes following analysis to better retain cultural significance.

27.2 Existing *fabric, use, associations* and *meanings* should be adequately recorded before any changes are made to the *place.*

Article 28. Disturbance of fabric

28.1 Disturbance of significant *fabric* for study, or to obtain evidence, should be minimised. Study of a *place* by any disturbance of the fabric, including archaeological excavation, should only be undertaken to provide data essential for decisions on the *conservation* of the place, or to obtain important evidence about to be lost or made inaccessible.

28.2 Investigation of a *place* which requires disturbance of the *fabric*, apart from that necessary to make decisions, may be appropriate provided that it is consistent with the policy for the place. Such investigation should be based on important research questions which have potential to substantially add to knowledge, which cannot be answered in other ways and which minimises disturbance of significant fabric.

Article 29. Responsibility for decisions

The organisations and individuals responsible for management decisions should be named and specific responsibility taken for each such decision.

Article 30. Direction, supervision and implementation

Competent direction and supervision should be maintained at all stages, and any changes should be implemented by people with appropriate knowledge and skills.

Article 31. Documenting evidence and decisions

A log of new evidence and additional decisions should be kept.

Article 32. Records

32.1 The records associated with the *conservation* of a *place* should be placed in a permanent archive and made publicly available, subject to requirements of security and privacy, and where this is culturally appropriate.

32.2 Records about the history of a *place* should be protected and made publicly available, subject to requirements of security and privacy, and where this is culturally appropriate.

Article 33. Removed fabric

Significant *fabric* which has been removed from a *place* including contents, fixtures and objects, should be catalogued, and protected in accordance with its *cultural significance*.

Where possible and culturally appropriate, removed significant fabric including contents, fixtures and objects, should be kept at the place.

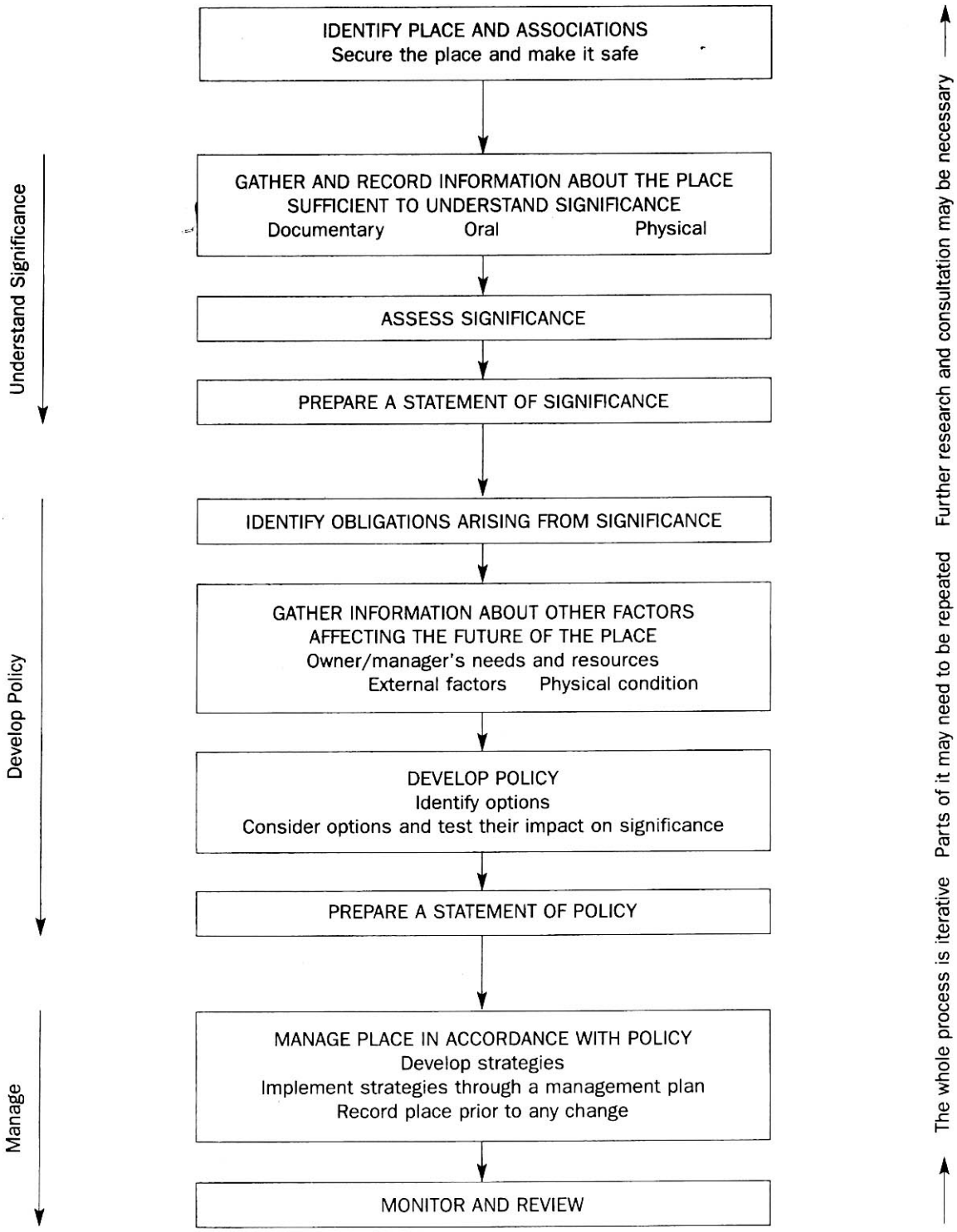
Article 34. Resources

Adequate resources should be provided for *conservation.*

Words in italics are defined in Article 1.

The Burra Charter Process

Sequence of investigations, decisions and actions



Appendix 2

University of Sydney Overview History

(Extract from the *University of Sydney Grounds Conservation Plan,* 2002:
Appendix A- University of Sydney Overview History)

THE PHYSICAL DEVELOPMENT OF BUILDINGS AND GROUNDS

Prepared by

Rosemary Kerr
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With

PRE-COLONIAL HISTORY AND DESCRIPTION

by

Dr Val Attenbrow, Australian Museum,
and Cheryl Stanborough

SUMMARY OF PLANNING AND BUILT FORM DEVELOPMENT

by

Donald Ellsmore

OVERVIEW OF THE DEVELOPMENT OF AUSTRALIAN UNIVERSITIES

by

Duncan Marshall

Table of Contents

1. INTRODUCTION

1.1 Authorship

This history was prepared by Rosemary Kerr in consultation with Sue Rosen of Sue Rosen & Associates, Heritage Assessment And History. The pre-colonial history and description was prepared by Dr Val Attenbrow, Australian Museum, with input by Cheryl Stanborough.

1.2 Using the History as a Management Tool

Organising an overview history of the physical development of the University of Sydney poses problems due to the diversity of buildings, sporting and leisure facilities which were constructed and modified over a long period of time in response to changes in the University's teaching requirements, planning philosophy and external influences.

For those concerned with managing the physical resource of the University , this overview history has been organised according to the following major chronological periods which reflect particular phases in the construction of buildings and facilities and the development of grounds: Foundation and Early Development, 1850-1880; Development of Medicine and the Sciences, 1880-1900; the Vernon and McRae Period, 1900-post WWI; the Wilkinson Era, 1920s - WWII; the Impact of WWII, 1945 - late 1950s; Transformation and Expansion, late 1950s - 1975; Reorganisation of the University System, 1975-present. Discussion of particular buildings and facilities has been where possible, arranged according to precincts, such as the main Quadrangle, Science Road etc., and by the type of facilities such as student union buildings, sporting facilities and grounds.

The table of contents encapsulates the overall structure of this history of physical development of the University. The design is intended to ease identification of data pertaining to specific periods and / or specific places relevant to management decisions. At the same time the broader issues impinging on developments have been identified and their impact addressed.

2. PRE-COLONIAL INHABITANTS AND LAND USE

The University of Sydney grounds are located on the northern slopes of a broad ridge forming the watershed between Port Jackson (Sydney Harbour) and Botany Bay. The grounds are about 3 km from Sydney Cove where the British established their first settlement, Sydney town, in 1788. To the first colonists the grounds were part of a large area they called 'the Kanguroo Ground' (Fig. 1#), which stretched from Parramatta Road southwards towards Botany Bay and the Cooks River. It was described as being one of the few areas between Botany Bay and Broken Bay that was suitable for cultivation (Tench [1793:161]1979:261, Collins 1798[1975]:225, 575n).

About two years after colonisation, part of the 'Kanguroo Ground' near the present-day junction of Parramatta and City Roads was set aside as reserves for Crown, church and school purposes, (Fig. 2#). In 1792, Lieutenant-Governor Grose was granted 30 acres out of the 400 acre Crown reserve on which to build a house, though he later changed the purpose of the lease to farming. Subsequently, leases were granted in the reserve and general district to several other officers for cultivation (Campbell 1925:119, 1930:274-276). Grose sold his lease to another officer when he left the colony at the end of 1974, but the area that is now the University grounds became known as Grose Farm and is marked as such on maps until the mid-1800s.

Aboriginal people were thus alienated from the lands that are within and around the University grounds very early in the history of British colonisation. The historical records provide many descriptions and observations about the people who lived around Port Jackson at the time of British colonisation. However, none of the records identify any definite associations with the land that was set aside as the site for the University of Sydney, or activities that were specifically undertaken on this land. In addition, no archaeological evidence relating to pre-colonial Aboriginal occupation or use of the area has been found within the University grounds, and there are no detailed descriptions of the vegetation and animal communities that inhabited this district. The following portrayal of the pre-colonial occupation and use of the Sydney University grounds is thus speculative, being based on a reconstruction of the original pre-1788

environment, an extrapolation from general historical descriptions or specific observations about the people who lived around Port Jackson and Botany Bay, and archaeological evidence from adjacent areas.

2.1 People – The Original Inhabitants

The tribe[1] of Cadi inhabit the south side, extending from the south head to Long-Cove; at which place the district of Wanne, and the tribe of Wangal, commences, extending as far as Par-ra-mata, or Rose-Hill. (King in Hunter 1793[1968:412])

From the entrance of the harbour, along the south shore, to the cove adjoining this settlement the district is called Cadi, and the tribe Cadigal; the women, Cadigalleon. The south side of the harbour from the above-mentioned cove to Rose Hill, which the natives call Parramatta, the district is called Wann, and the tribe Wanngal. (Phillip 13 February 1790[1892:309])

In these two quotes which set out the extent of the country associated with two of the Port Jackson clans, the Cadigal and Wanngal, their common boundary is in different places. Phillip Gidley King placed the boundary at Long Cove – presently known as Iron Cove. If this was the boundary between the two groups, the University grounds are within Cadi. This would also be the case if the boundary was along the ridgeline forming the eastern watershed to Iron Cove (in many parts of Australia ridgelines and watercourses form/formed the boundaries between cultural areas).

If the 'the cove adjoining this settlement' referred to by Governor Arthur Phillip is Darling Harbour, and the boundary between the Wanngal and Cadigal is taken as either the ridgeline between Darling Harbour and Blackwattle Bay or the creek running into Darling Harbour or even Blackwattle Creek, then the University grounds are situated at the eastern end of Wanne.

To the south, the Kameygal lived around the shores of Botany Bay, known to them as Kamay. It is possible that the ridge of high land between Port Jackson and Botany Bay (along which King Street, Newtown, now runs) formed a boundary between the Kameygal and the Wanngal / Cadigal.

2.2 Subsistence and material culture

The people living around Port Jackson and Botany Bay gained their foods by fishing, hunting land animals and gathering shellfish and plants (Attenbrow in prep; Turbet 1989). Fishing appears to have formed a greater part of subsistence activities around the harbour mouth and Botany Bay, more than it was along the Parramatta River. However, hunting land animals, catching birds and collecting small animals were also important, particularly during periods of cold or inclement weather when fish were scarce. Shellfish and plant foods were probably also important components of the diet, though there are very few observations of these activities by the early colonists.

Many different tools and weapons were used in obtaining food and raw materials, for carrying small items, making equipment, and for defensive and offensive purposes. These included fishing and hunting spears, spear-throwers, fishing hooks and lines, stone hatchets, shields, clubs, digging sticks, baskets, net bags and other containers, as well as canoes, animal traps, torches, small adzes and scrapers, awls, 'pounding and beating stones', stone wedges and fire. Unmodified shells and stones were used opportunistically on some occasions as cutting or adzing tools and missiles.

Tools, weapons and other objects were made from a range of natural products – wood, bark, reed and other plant materials, as well as bone, shell, animal skins, sinew and stone. The early colonists' observations suggest that coastal groups used stone as implements less often than hinterland groups (e.g. those on the Cumberland Plain), and that bone or shell was used in its place for items such as spear barbs, adzes and scrapers (Hunter 1793[1968]:519; Collins 1798[1975]:488).

[1] Many of the early writers referred to these named groups as 'tribes', but they were not tribes in the current anthropological sense of the word. The groups were clans or in some cases bands.

2.3 Locational Details and Reconstruction of Pre-1788 Environment

Topography and geology

The University grounds are on part of a broad ridge system which forms the watershed between Port Jackson and Botany Bay, an arm of which extends north from the watershed down between Blackwattle Bay and Rozelle Bay and their respective tributaries. At its highest points in this area the ridgeline is between 30 m and 40 m above sea level. The high land in the north-eastern corner of the University grounds around the Main Quadrangle, which was earlier known as Petersham Hill, overlooked the lower reaches of Blackwattle Creek.

These broad ridge tops are capped with Wianamatta shales. These are underlain by Hawkesbury sandstone, which is exposed around the foreshores of Port Jackson in the north, the cliffed coastline in the east, and along part of the Cooks River in the south-west. Quaternary sediments in the form of dunes or sand-hills cover a large expanse of land to the south-east as far as the shores of Botany Bay. The University grounds are wholly on the Wianamatta shales, and there is no outcropping sandstone.

The geology of the district is important as the distribution of Aboriginal archaeological sites in the Sydney region is very much associated with the distribution of the particular geological formations that dominate different parts of the countryside. The absence of Hawkesbury sandstone within the University grounds means that Aboriginal sites that are associated with sandstone formations would not have been present. Such sites include rockshelters (which contain pigment images, shell midden or archaeological deposit), rock engravings which occur on open rock platforms, and grinding grooves which occur on rock surfaces associated water sources (creek lines, rock pools on rock platforms or driplines in rockshelters).

Associated with the Wianamatta shales, buried silcrete bodies have been identified at Newtown (in the block between King, Eliza, Mary and Lennox Streets), less than 1 km to the south west of the University grounds (Byrnes 1982:9-10). The silcrete bodies are part of a Tertiary period palaeochannel, the exact course of which is presently not mapped – but it is possible it extends within the University Grounds (Tessa Corkill pers. comm).

The potential presence of silcrete and its possible accessibility and quality is of interest as it is one of the most commonly used rock types for making small flaked implements in the Sydney region. Although historical observations indicate that stone was infrequently used by coastal people in 1788, assemblages from coastal archaeological sites of the Sydney region indicate that small stone implements were used throughout the pre-colonial periods.

Waterways and water sources

The upper reaches of several creeks running into Port Jackson have their headwaters on the watershed ridge between Port Jackson and Botany Bay. Most of these creeks are now
concrete canals or landscaped, particularly in their upper reaches, so that they are no longer recognisable as creeklines. Blackwattle Creek, which runs into Blackwattle Bay, began in a swampy area where Darlington School now stands. It ran north-east through what is now the Engineering Faculty towards Victoria Park and Chippendale, where there were several other freshwater swampy areas, before it ran into the estuarine Blackwattle Swamp at its mouth. On the western side of the University grounds were the upper reaches of watercourses running into Johnstons Creek, in particular Orphan School Creek which started where No 1 and 2 ovals were built. Thus, while the University grounds are on a ridge top, freshwater sources and swamps were present in or in close proximity to most parts of the grounds.

The estuarine foreshores and waters of Port Jackson are little more than 1 km distance in Darling Harbour and Blackwattle/Rozelle Bays. To the south, somewhat further away, but still within 6 or 7 km, is Botany Bay, as well as Cooks River and Sheas Creek (the latter now called Alexandra Canal). Consequently, estuarine resources such as fish and shellfish are available in relatively close proximity to the University grounds.

Soils and vegetation communities

Stretching along the higher ground from Hyde Park to the south-west through Chippendale to Newtown, St Peters and Glebe, and as far west as Auburn, the clayey soils of the Wianamatta shales were covered with Turpentine-Ironbark Forest, with trees up to 20-30 m tall in an open forest structure (Benson & Howell 1990:17-18, 44). Except for William Bradley's (1786–92[1969]:232B) March 1791 report in which he states that the 'Brown Bark'd Gum Tree … grows in the Kanguroo Ground …', there are no historical descriptions

detailing the nature and species composition of the vegetation that existed on the University grounds before it was cleared. The following information comes from early descriptions around Annandale and small remnant patches of Turpentine-Ironbark forest in the inner western suburbs (Benson & Howell 1990:46-47, 61).

In addition to Turpentines *Syncarpia glomulifera* and Grey Ironbark *Eucalyptus paniculata*, other large trees grew in these forests; these included White Stringybark *E. globoidea*, Blackbutt *E. pilularis*, Red Mahogany *E. resinifera*, Scribbly gum *E. haemastoma* and Red Bloodwood *Corymbia gummifera* (previously *Eucalyptus*), as well as Smooth-barked Apple *Angophora costata.* Understorey species in the Turpentine-Ironbark Forest included species listed in Table A1 which have edible and/or useful parts.

The swampy sections of Blackwattle Creek where it ran through Chippendale were described as 'boggy, in part rich soil, suitable for intensive agriculture' (Fitzgerald 1990:14). Its swampy headwaters were also likely to have been poorly-drained ground rather than swamps with standing water. As such they are unlikely to have had reeds such as *Eleocharis sphacelata, Phragmites australis* and *Triglochin procera* (Doug. Benson pers. comm.), which have edible roots and tubers, and which grow in the freshwater Botany and Lachlan Swamps nearer the coast. Its vegetation is likely to have been similar to the swampy headwaters of the Tank Stream, which was at the boundary of the sandstone and Wianamatta shales, and is assumed to have included Scribbly Gum *Eucalyptus racemosa*, banksias *Banksia spinulosa* and *B. oblongifolia*, bottlebrush *Callistemon citrinus*, ti-tree *Leptospermum flavescens* (*now polygalifolium*), and paperbarks *Melaleuca decora* and *M. styphelioides* (Benson & Howell 1990:42; Campbell 1924:67).

Of those plants listed in Table A1, only a few have been identified as food plants referred to in the early historical sources of the Sydney region. Native cherry *Exocarpus cupressiformis* is possibly the fruit described by Governor Phillip as:

> … another fruit, which, when ripe, is of a transparent red colour, about the size of a currant, and shaped like a heart: it has an agreeable flavour, leaving an astringency on the palate, and cannot be otherwise than wholesome, as the settlers had ate great quantities of it at times, without any pernicious consequences. (Phillip in Hunter 1793[1968]:478-479)

The colonists referred to Banksia flowers generally, but not by species name. They observed the local inhabitants collecting them for their nectar from which a sweet drink was made by soaking them in water (Collins 1798[1975:462-463]; Bellingshausen 1820 in Barratt 1981:35). The ferns referred to by the early colonists may have been *Blechnum cartilagineum* and the orchids could have been several of those that grow in coastal Sydney:

> … they were frequently found gathering a kind of root in the woods … This root appears to be a species of the orchis, or has much of its nutritive quality. … those roots which appear to be a great part of their subsistence during the winter. (Hunter 1793[1968]:80-81)
>
> I have several times met with small parties of them seeking roots and spungy [sic] substances which grow on some of the Trees & yield a small seed and sweet juice …: the Fern & some other roots they prepared by moistening & beating between two stones a considerable time before they use it ... (Bradley 1786-1792[1969]:134-135)

The other plants listed in Table A1 were reported as being eaten in other parts of eastern Australia, and thus could have been eaten in the Sydney region too.

Some plant materials used in making tools and equipment were also available in the areas of Turpentine-Ironbark forest. Bowls, referred to as *Goo-lime* were made from the hollowed knots (gnarls) of a large tree (Smith & Wheeler 1988:Plate 50 inscription; White 1790[1962]:157), which was possibly the Smooth-barked apple *Angophora costata*. The bark of 'tea-trees', which were probably paperbark trees *Melaleuca* sp. was reported to have been used around Port Jackson as a 'blanket' in which a newborn baby was wrapped (Phillip in Hunter 1793[1968]:544; Collins 1798[1975]:465,612,note 14), and in other parts of the Sydney region as bedding and a torch (Barrallier 1802[1975]:48; Phillip in Hunter 1793[1968]:514 respectively).

In other parts of south-eastern Australia, the leaves of other Lomandra species were used for basket work (Maiden 1889[1975]:634), and those of *Lomandra longifolia* may have been used in Sydney region for such purposes.

There were thus both food and raw material plant resources that would have attracted people to the Turpentine-Ironbark forests, though none of these plants are restricted in distribution to only this association. These forests do not appear to have been as resource-rich (at least in terms of diversity of species, and possibly abundance) as the extensive heath and swamp communities of the sand-hills between Bondi and Botany Bay which were only a few kilometres to the east, or the fringing communities that grew along the small sandstone gullies, such as the Tank Stream which ran down into Port Jackson (Benson & Howell 1990:42; Campbell 1924:66-69). This perception, however, may be due to the lesser knowledge available about the plant communities of the Turpentine-Ironbark forest.

Animal communities

Again, there are no detailed accounts of the animal communities that lived in the Turpentine-Ironbark forest or the small swamps and creeks that occurred on the Wianamatta shale in this part of Sydney. The fact that the University grounds are part of an area that was known as 'the Kanguroo ground' indicates such animals inhabited the district. Many other animals would have inhabited this district too – wallabies, possums, gliders, bandicoots, native cats, flying foxes, marsupial mice, water rats, native rats, numerous birds (including emus), goannas, blue tongue lizards, and tortoises – all of which were included in the diet of the pre-colonial inhabitants.

Fish and shellfish of edible size or quantity may have not inhabited the sections of the freshwater creeks and swampy areas within the University grounds, but the nectar-producing plants of these habitats would have attracted many birds such as parrots and parakeets, which were eaten (Franklin 1802 in Ross 1976:25). The adjacent estuary and its shorelines, with its abundant fish and shellfish may have provided the main focus for gaining animal foods, except in cold or bad weather when fish were scarce or when a change in diet was sought.

Table A1. Plants with edible and useful parts that are likely to have grown in the Grounds of Sydney University and likely to have been used by local pre-colonial Aboriginal inhabitants

Scientific name	Common name	Edible parts	Useful parts
Turpentine-Ironbark Forest			
Acacia decurrens	Black Wattle, Green Wattle	**Gum** soaked in water as drink (Vic. Bunce 1859 in Robinson 1994:62). **Seeds** ? **gum** ? (Acacia sp. NSW south coast. Lampert & Sanders 1973:104)	
Acacia falcata	Hickory, Sally Wattle	**Seeds** ? **gum** ? (Acacia sp. NSW south coast. Lampert & Sanders 1973:104)	**Bark** used to stupefy fish (Counties of Cumberland and Camden. Maiden 1889[1975:149])
Angophora costata	Smooth-barked Apple		Hollowed **bark/gnarl** used as container (Port Jackson area, Smith & Wheeler 1988:Plate 50 inscription; White 1790[1962]:157
Astroloma humisifusum	Native Cranberry	**Fruit** (NSW south coast, Lampert & Sanders 1973:104	
Billardiera scandens	Apple Berry/Apple Dumpling	**Berries** (NSW south coast, Lampert & Sanders 1973:105; Port Stephens, Scott in Bennett 1929:22)	
Blechnum cartilagineum	Gristle Fern	**Rhizomes** (Moreton Is, SE Qld, Backhouse 1843:363, 371)	
Cissus hypoglauca	Water Vine	**Fruit**; **water** from vine? (NSW south coast, Lampert & Sanders 1973:106)	
Clematis glycinoides	Old Man's Beard	**Scent** from crushed leaves used for head-aches (no area, Cribb & Cribb 1976:221)	
Clerodendrum tomentosum	Hairy Clerodendrum	**Fruit** (of *Clerodendru inerme*, nth Qld, Roth 1901:10)	
*Corymbia gummifera (*prev. *Eucalyptus gummifera*)	Red Bloodwood		**Gum/sap** (used on NSW south coast to treat fishing lines to stop them fraying. Lampert & Sanders 1973:108)
Dianella caerulea	Blue Flax Lily		**Fibre** of leaves (of *D. longifolia*) used to make baskets (no area, Maiden 1889[1975:621])
Dianella revoluta	Flax Lily		ditto
Exocarpus cupressiformis	Native Cherry	**Fruit** (Port Jackson area ?, Phillip in Hunter 1793[1968]:478-479; NSW south coast, Lampert & Sanders 1973:106)	

Eucalyptus spp	Ironbarks	**Nectar** (of ironbarks, Vic. Sir Thomas Mitchell in Cribb & Cribb 1974:182)	
Geranium homeanum	Northern Cranesbill	Swollen **taproot** (of some *Geranium* spp. Vic. Hope & Coutts 1971)	
Glycine tabacina		**Root** (no area, Cribb & Cribb 1974:142)	
Kennedia rubicunda	Running Postman	**Nectar** (of *K.prostrata*, NSW south coast, Lampert & Sanders 1973:105)	**Stems** of *Kennedia prostrata* used as string (NSW south coast, Lampert & Sanders 1973:108)
Leucopogon juniperinus ?	Native Currant, Bearded-Heath	**Fruit** (of *L. parviflorous*, SE South Australia, Cleland 1966:134)	
Leucopogon lanceolatus ?		ditto	
Lissanthe strigosa ?	Peach Heath, Prickly Heath	**Fruit** (no area, Maiden 1898:353)	
Lomandra longifolia	Spiny-headed Mat Rush Long-leaf Mat Rush	**Nectar** (of several species, Vic. Brough Smyth 1878:213	**Leaves** (of *Lomandra* spp. for making baskets Maiden 1889[1975:634])
Morinda jasminoides		**Fruit** (of *M. citrifolia*, Nth Qld, Maiden 1889[1975:45])	
Orchids, various species	various	**Tubers** (Port Jackson area, Hunter 1793[1968]:80-81)	
Oxalis corniculata	Clover Sorrel	**Leaves** and **roots** (Vic. SA, Cleland 1966:135, Hope and Coutts 1971)	
Rubus parvifolius	Native Raspberry	**Fruit** (NSW south coast, Lampert & Sanders 1973:106)	
Smilax glyciphylla	Sweet Sarsaparilla	**Leaves** sucked, perhaps medicinally (NSW south coast, Lampert & Sanders 1973:106)	
FRESHWATER SWAMPY AREAS			
*Banksia oblongifolia (*prev. *B. asplenifolia)*	Banksia	**N**ectar of banksia (Port Jackson area, Collins 1798[1975:462-463]; Bellingshausen 1820 in Barratt 1981:35	
Banksia spinulosa	Hair-pin Banksia	ditto	
Melaleuca decora	Paper bark. White-feather Honeymyrtle		**Bark** of *Melaleuca.* spp. used as – wrap for baby (Port Jackson area, Phillip in Hunter 1793[1968]:544; Collins 1798[1975]:465,612,note 14); – torch (firestick) (Hawkesbury River, Phillip in Hunter 1793[1968]:514); – bedding (Nattai district, Barrallier 1802[1975]:48;
Melaleuca styphelioides	Prickly-leaved Paper bark		ditto

3. EARLY HISTORY OF GROSE FARM AND DARLINGTON

3.1 Church, School and Crown Land

When Governor Phillip explored the countryside surrounding the initial settlement at Sydney, he selected an area around Petersham Hill, then known as the "Kangaroo Grounds" for church, school and Crown purposes. The arrangement was formalised when in August 1789 one thousand acres was divided as follows: 400 acres on the north fronting the harbour was designated as church or glebe land; 200 acres on the south for the maintenance of a schoolmaster; and 400 acres between, for the Crown.[2] Under Phillip the land was used as pasturage for horses and draught cattle employed in works at Sydney. Beyond this area his officers were encouraged to take up small farming tracts. The site on which the first campus of the University of Sydney developed formed part of the 400 acre Crown Reserve, while what later became the Darlington area was situated within the 200 acres of School Reserve. (See Map A in Campbell, p.275).

3.2 Grose Farm

Lieutenant-Governor Francis Grose of the NSW Corp set his sights on the Petersham Hill area as the ideal location for a country residence and in late 1792 he was granted a fourteen year lease of 30 acres within the 400 acres Crown Reserve. The Orphan School Creek and valley augured well for agriculture and provided Grose with the opportunity of supplementing his salary by supplying produce to the Commissary. In 1794 Captain James Foveaux was granted 30 acres adjoining *Grose Farm* on the south. Nearly four years later a another lease of 28 acres was granted to Quartermaster Thomas Laycock, adjoining *Grose Farm* on the east. When Grose retired to England, it is surmised that his farm temporarily reverted to Laycock but eventually *Grose Farm* reverted to the Crown.[3]

3.3 Surrounding Area

Land surrounding Petersham Hill Reserve and Camperdown Park on the west were cultivated for grain and other crops; intrusions were also made to the south; then gradually land on the northern side of Parramatta Road was alienated for cultivation, however, farming was not the only activity carried on in the area. In what became known as the Orphan School Creek Valley convicts and other workers were employed in forming a timber yard in 1793; nine huts were built for labouring convicts and '60 acres of government ground cleared of timber, 20 acres of which were sown with Indian corn.'[4]

Parramatta, Newtown and Missenden Roads were bush tracks, with their route partly determined by various stream crossings where water was available for thirsty travellers. Missenden Road, may have been named after the stretch of road joining the villages of Great and Little Missenden, Buckinghamshire, England.[5]

[2]J.F. Campbell, "The Early History of the Sydney University Grounds," *Royal Australian Historical Society Journal and Proceedings*, Vol. 16, Part IV, 1930, 274-292, pp.274-276, 282.

[3]Campbell, *op. cit.*, pp.277-278.

[4]Campbell, *op. cit.*, pp.278-279.

[5]Campbell, *op. cit.*, p.278.

3.4 Female Orphan Institution

In 1801 a Female Orphan Institution was established in Sydney and located in a house on the corner of George and Bridge streets.[6] Among several grants vested in the trustees of the Institution at various times was an area of 500 acres in the district of Petersham, which encompassed all the land formerly reserved for school and Crown purposes south of Parramatta Road, with the exception of Major Foveaux's leased allotment of 30 acres, but including Laycock's *Grose Farm,* which by then had increased to 58 acres. Eventually the name, *Grose Farm* was generally applied to the area between the Newtown and Parramatta Roads. The purpose of the grant was to provide the Orphan Institution with land for raising and maintaining stock and to be otherwise disposed of for the Institution's benefit. In 1806 the land was advertised to be let for three years and was described as,

> comprising 500 acres, about 50 acres of which are cleared; together with a commodious farm residence, and out-buildings, and two good gardens.[7]

While Norman claims that the institution was established on the banks of a creek, almost opposite the site of the present Prince Alfred Hospital and contributed its name to the creek and valley,[8] the exact location of the farm buildings has not been substantiated. It is possible that the School made use of and extended buildings that existed on Grose's farm, in the area now occupied by St John's College grounds and possibly part of the Veterinary Sciences precinct.

3.5 Subdivision

In August 1806, with the consent of the trustees, Governor King granted 220 acres of that area to his successor, William Bligh for the purpose of a private residence. This was subsequently increased to 240 acres and encompassed that portion of the Orphan School grant lying to the south-west of the (later) University reserve together with a triangular area bounded by Orphan School Creek on the north-east and Johnstone's Creek on the north-west. Bligh named his grant, *Camperdown*.[9]

There was a long delay in validating Bligh's grant and subsequently his legatees subdivided and sold part of it. The remainder, comprising 280 acres, was re-invested in the trustees of the Orphan Institution and remained in its control until 1823, when, it again reverted to the Crown.[10]

Major George Druitt, inspector at *Grose Farm* from 1817, gave evidence before Commissioner Bigge in November 1819 during Bigge's inquiry into the affairs of the colony. *Grose Farm* was described as being of inferior quality due to its heavy, adhesive clay which required much work. Since 1819, when the Female Orphan School was removed to Parramatta upon completion of its new premises, the land at *Grose Farm* was gradually cleared of trees and stumps. The old dwelling house which stood on the land when it was in possession of the Orphan Institution was enlarged, farm buildings added and convict accommodation built, including a stockade to accommodate over 100 convicts, men and boys employed in agriculture on government account; the convicts' lodgings consisting of one large house and two smaller ones. The stockade was described as standing well back from the old Parramatta Road midway between the present entrance gates to St. John's College. A surveyor's sketch dated 1827 shows structures on St John's college land which is probably the stockade site.[11] (See Surveyor's Sketch of 'Grose Farm' in 1827 and Campbell, Map B, p.283)

A series of tanks had been formed by 'deepening and widening the course of a small rivulet that traverses a portion of the farm' and a reservoir was made in the lowest part where it adjoined the public road (Parramatta

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[6] J. A. Tunnicliffe, "Grose Farm" Part VI in *Hermes*, 1921, 260-264, p.260; F.M. Bladen (ed.), *Historical Records of NSW*, Vol. IV, 1800-1802, Lansdown Slattery & Company, Sydney, 1979, p.133.

[7] Campbell, *op. cit.*, pp. 279-280.

[8] L. G. Norman, *Historical Notes on Newtown*, Council of the City of Sydney, Sydney, 1963, p.4.

[9] Campbell, *op. cit.*, pp.280-281.

[10] Campbell, *op. cit.*, p.281.

[11] John Ritchie (ed.), *The Evidence to the Bigge Reports, NSW Under Governor Macquarie, Volume 1 the Oral Evidence*, Heinemann, Melbourne, 1971, pp.31-32; Campbell, *op. cit.*, pp.282, 283; Tunnicliffe, *op. cit.*, pp.262, 264; SR: Surveyor's Sketchbooks, Vol. I, Folio 7, Sketch by Surveyor P. Elliott, "Grose Farm" 10 December 1827.

Road). The site once occupied by the weir and part of the large dam which supplied water to Grose Farm is buried at least twenty feet beneath the new Parramatta-road and the buildings extending back to the old Parramatta Road, now Arundel Street.[12] Vegetable gardens for use of the convicts were laid out on the banks of Orphan School Creek, although the farm's produce was consumed chiefly as green food for the draught cattle employed at Sydney. The old fence surrounding the farm was replaced by a four-rail fence and efforts were made to make *Grose Farm* an example of the best methods of English modes of agriculture and husbandry through use of the best labourers and implements.[13]

3.6 Pastoralism

When *Grose Farm* reverted to the Government in 1823 an attempt was made to instruct the male orphans in cultivation of vineyards, with a view to introducing their cultivation in the colony. However, with little prospect of return this idea was abandoned and it was decided to break up the establishment and to use the greater part of the area for pastoral purposes only.[14]

In order to secure it for the agistment of horses and cattle it was necessary to fence off the Parramatta, Newtown, St Paul's and Missenden Roads. This reduced the enclosed area to 194 acres, including Foveaux's lease. The marginal area to the south-east which later developed into the part of the suburb of Darlington was then granted to various individuals.[15]

In the early 1830s when extensive improvements were made to the road system, part of *Grose Farm* was utilised as a stockade for convict road gangs, by the Surveyor-General, Major Mitchell. The stockade already existing on the land where St John's College now stands was probably used by the road gang (see Campbell, Map B, p.283 and Surveyor's Sketch of 'Grose Farm' in 1827). Eventually the farm buildings became obsolete and disappeared. During the 1850s the course of Parramatta Road was altered and the cutting through which it now passes was created. The old road, now Arundel Street, once passed very close to the site on which the Botany buildings are now located. It is possible that remnants of the old road may be found beneath this area.[16]

In 1832 consideration was given to allocating *Grose Farm* for use of the Governor as a rural retreat. However Governor Gipps objected, claiming that the farm's proximity to Sydney and the fact that streets were about to be laid out through part of it meant that it would be absorbed by the town of Sydney within a few years. At the time it was 'divided into grazing paddocks and let in eight lots to the butchers of Sydney.'[17]

In the early 1850s some small grants were dedicated to the Church of England and Roman Catholic Church for purposes of schools, parsonage and presbytery, however no building took place and the area remained very much a wasteland, used for grazing. Between 1855 and 1856 approximately 126 acres were granted to the University of Sydney (See Campbell, map C).[18]The University grew and expanded over this area until the late 1950s when additional land was sought across City Road.

[12]Tunnicliffe, *op. cit.*, p.264.

[13]Campbell, *op. cit.*, p.282.

[14]Campbell, *op. cit.*, pp.283-285.

[15]Campbell, *op. cit.*, pp.283-284.

[16]Campbell, *op. cit.*, pp.286, 291;, SR: Surveyor's Sketchbooks, Vol. I, Folio 7, Sketch by Surveyor P. Elliott, "Grose Farm" 10 December 1827; David Curtis, "The University of Sydney Grounds & Gardens >From Bushland to the Present Day," unpublished manuscript, 1981, (SUA: R.387), p.17. Curtis cites Sam McKay, an ex-collector of the Botany Department as his informant re the possibility of finding remains of the old Parramatta Road under the Botany precinct.

[17]Campbell, *op. cit.*, pp.285-286.

[18]Campbell, *op. cit.*, p.287.

3.7 Darlington Area

During Governor Macquarie's administration, when land in the *Grose Farm* area was fenced for pastoral purposes the land to the south-east of Newtown Road was granted to various individuals. William Hutchinson received 52 acres, known as *Golden Grove*. The *Golden Grove Estate* was also known as the 'Bullock Paddock' as it was used to pasture cows destined for the Sydney meat market. Thomas Shepherd received 28 ½ acres and Robert Cooper, 17 ½ acres on which he established a brewery. The remainder of the area was included in William Chippendale's grant. (See Map B, Campbell p. 283). The soil in the general area was rich and suitable for intensive agriculture. Chippendale ran cattle and grew potatoes and barley on his grant.[19]

Shepherd was a botanist, who was originally attached to a party of colonists heading for New Zealand, however the project was abandoned and they landed in Sydney. By 1827 Shepherd had begun to establish a garden and nursery business at Darlington and named his property the *Darling Nursery*, presumably in honour of the then incumbent Governor Darling. The Nursery became a landmark in the area and is commemorated by the streets named Shepherd, Pine, Ivy, Vine, Myrtle and Rose. It is believed that the name Darlington was derived from Shepherd's Darling Nursery.[20] (Map in Fitzgerald, *Chippendale*, p.29 shows plan of area with Grose Farm, Shepherd' and Cooper's land c. 1850; a sketch on p. 34 shows a view from the University c. 1855 looking towards Chippendale, on the right can be seen Shepherd's house and nursery.)

The Black Wattle Swamp Creek line marked the southern boundary of Darlington, rising out of swampy ground in what became the grounds of Darlington Public School at the corner of Golden Grove and Abercrombie Streets. The first section of the old Newtown Road followed what is now Darlington Road, however, in later years a new track was formed around the head of Blackwattle Creek by people who had difficulty in passing over the boggy crossing on the old road; the new route formed the present line of City Road. This resulted in an area being excised from a farm paddock; the remaining 9 acres was fenced off and ultimately granted to E. S. Hall. This land lay between City Road and Darlington Road, excluding the later site of the Deaf, Dumb and Blind Institute and was subdivided in 1856. A grant of 9 acres to a Mr O'Brien, which was disposed of during the Crimean War, in the 1850s resulted in the streets called Alma, Raglan and Codrington, commemorating two British generals and a famous battle.[21]

3.8 Subdivision and Residential Development

The 1850s saw the beginnings of residential development in the area and the establishment of hotels and commercial buildings. The municipality of Darlington was established in 1864, its boundaries being Blackwattle Creek, Cleveland Street and Codrington Street. At the time its population was 700 and it contained 169 houses and five miles of streets. The area grew steadily between 1864 and 1876. In 1879 the 'Golden Grove' Estate was subdivided into 36 sections for housing.[22]

With the construction of the Eveleigh Workshop in 1882, the population increased dramatically; and by 1883 there were 490 houses. By that time the Shepherd Nursery had been broken up. Increasing industrial activity was a major factor in the suburbanisation of the area during the 1880s and[23]by 1890 industries operating in Darlington included a jam factory, iron foundry, a zinc and brass works, two cabinet factories, a cordial factory, a portmanteau factory and other small industries. The residential areas of Darlington expanded in response to the demand for workers in these industries and the population reached 3,020 with 725 houses in 1890. Such an environment also encouraged further sale of the 'Golden Grove' Estate. Commercial activities developed as the residential population increased and several shops and small businesses formed part of the area.[24]

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[19]Casey & Lowe Associates, *Archaeological Assessment Sections of the Darlington Campus, University of Sydney*, Unpublished report for University of Sydney, n.d., p.9; Campbell, *op. cit.*, pp. 283-284; Shirley Fitzgerald, *Chippendale, Beneath the Factory Wall*, Hale & Iremonger, Sydney, 1990, pp.13-16.

[20]Norman, *op. cit.*, p.45; Ann Sutherland, *Darlington Public School, 1878-1978*, Darlington Public School Parents & Citizens Association, Sydney, 1978, p.7.

[21]Casey & Lowe, *op. cit.*, p.9; Campbell, *op. cit.*, p.284; Norman, *op. cit.*, pp. 6, 46.

[22]Sutherland, *op. cit.*, p.7; Casey and Lowe, *op. cit.*, pp.9, 11.

[23]Casey and Lowe, *op. cit.*, p.14.

[24]Casey and Lowe, *op. cit.*, pp.9-10; Sutherland, *op. cit.*, p.11.

By 1891 the population of Darlington had increased to 3,500, giving it the highest population density of any suburb, outstripping Paddington, Redfern and Newtown. The area remained fairly stable into the twentieth century, with the population in 1918 being 3,920. Fitzgerald contrasts the suburbs of Darlington and Camperdown, which were primarily industrial, working class and Irish to neighbouring Newtown, in which there was a high proportion of native born and English and more skilled and self-employed traders. Streets in Darlington and Camperdown were narrow and the terraces mean, while Newtown contained some free-standing houses and terrace construction houses.[25]

Since the 1920s there had been an increase in low-level industrial buildings in the suburb. By the beginning of World War II many families whose men folk had joined the forces moved to country areas to be closer to relatives, however, in the post-war period migration brought new settlers to the inner-city, close to factory employment; many Aboriginal families had also returned to the area.[26]

3.9 Institute Building and Darlington School

As well as residential, industrial and commercial development, two other institutions formed a significant part of the history of the area and were associated with important community activities. These buildings were partly incorporated into the expanded University campus. They were the Deaf, Dumb and Blind Institute and the Darlington Public School.

Deaf, Dumb and Blind Institute

The Institute Building was built on five acres of land granted on the Newtown Road in 1870 to the NSW Institution for the Deaf, Dumb and Blind. This institution had begun in 1860 when Thomas Pattison founded the first school for the deaf in Australia. It became a public charity in 1861, then in 1870, with the inclusion of blind children, became known as the NSW Institution for the Deaf, Dumb and Blind. After a limited architectural competition, Benjamin Backhouse was appointed architect for the first stage of construction to accommodate 70 children. The high Victorian institutional building was constructed in three phases:1870-1872, 1878-1879 and 1883-1884. An associated Superintendent's residence was built in c. 1886-1891.[27]

The grounds of the Institute encompassed most of the triangular block fronting City Road and were originally bounded by a picket fence. Permanent fencing was erected around the entire curtilage, first on the Newtown Road frontage in 1878, followed by Codrington Avenue in 1883, and the stone piers of the fence feature the signature motif of architect, Benjamin Backhouse. Some of the fencing survives as an important indication of the original boundary.[28]

During the influenza epidemic following World War I it was used as an emergency hospital. In World War II it was occupied by the RAAF between 1942 and 1944. For nearly a century this was the largest institution for deaf, dumb and blind children in Australia and a successful public charity.[29]

Darlington Public School

The school was opened in 1878, located on half an acre next to the Town Hall on the Old Newtown Road. It provided a much needed local school for the growing population in Darlington. The school was designed by George Allen Mansfield, architect to the Council of Education. The continued subdivision and increasing population density caused almost continual overcrowding and further school buildings and a teacher's residence were erected in the 1880s, on land next to the original school, purchased from a Roman Catholic trust. [30]

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[25]Casey and Lowe, *op. cit.*, pp. 10, 13; Shirley Fitzgerald, *Rising Damp, Sydney 1870-90*, Oxford University Press, Melbourne, 1987, p.34.

[26]Sutherland, *op. cit.*, p.11.

[27]DPWS Heritage Design Services & Otto Cserhalmi & Partners Pty Ltd., *The University of Sydney Section 170 Register*, 2000, Item 4726050.

[28]*Ibid.*

[29]DPWS, *op. cit.*, Item 4726012.

[30]Sutherland, *op. cit.*, pp.8-9.

Between 1900 and 1920 the school became a practice school for the Teachers' College. As insufficient space prevented the addition of new buildings, two of the existing buildings were remodelled to two-storeys; a room was rented in the Council Chambers and the Headmaster's residence was used for school activities.[31]

During World War I the school began a garden on a vacant piece of ground at the back of the Council Chambers, to provide flowers and vegetables. In the following decade memorial gates were placed at the entrance to the school for local citizens who served in the War. The school's front fence was subsequently rebuilt in stone to match the gates. Another memorial was erected in 1929 by Alfred Edward, who wished to have a drinking fountain built near the gates to commemorate his parents who were two of the original citizens of the district. The fountain was to be reinstalled as part of the University's renovation of the school building.[32]

During the Depression the school was used increasingly by the community. A soup kitchen was set up, funded by the Darlington-Golden Grove Benevolent Society, to provide hot lunches for the children. Free milk was distributed each morning to the families of the unemployed. Following the installation of electricity, the school was used as a meeting place for the Girl Guides and the local branch of the A.L.P.[33]

3.10 University Extension into Darlington

Following the adoption of the Cumberland County Planning Scheme the State Government re-zoned part of the Darlington area as a 'special uses' or University Extension Area, enabling the University of Sydney to extend its campus across City Road into Darlington. This expansion, which began in the late 1950s and continued throughout the next decades resulted, despite increasing community opposition and resentment, in the loss of about 650 dwellings as well as shops, factories, bank, post office, Town Hall and other amenities, which were demolished. Roads and lanes were progressively closed or removed and the population of Darlington decreased by about 2,000. The surviving parts of Darlington now comprise some terrace houses, the Institute Building and a section of the original Darlington Public School. [34]

[31] Sutherland, *op. cit.,* p.11.

[32] Sutherland, *op. cit.,* p.11.

[33] Sutherland, *op. cit.,* p.11.

[34] Sutherland, *op. cit.,* pp.11-12.

4. UNIVERSITY OF SYDNEY FOUNDATION AND EARLY DEVELOPMENT 1850-1880

4.1 Background to Foundation

The founding of the University of Sydney in 1850, Australia's first, took place within the context of national and international developments during the second quarter of the nineteenth century. Among these, on a national level, were the growing social and political influence of an urban middle class which emerged as the numbers of free settlers increased in New South Wales and as Sydney developed as a major port and centre of commerce. The interests of this group influenced the development of a system of national secular education in the 1840s which led to publicly funded primary and secondary schools. Eventually, the rising class of bankers, manufacturers and professional men saw a growing need for the state to provide a higher level of education:

> by which men may be fitted to discharge the duties and offices belonging to the higher grades in society; to enable her citizens to become enlightened statesmen, useful magistrates, learned and able lawyers and judicious physicians.[35]

Interest in establishing an institution of higher learning was by no means universal. Among many sections of society there was a general apathy towards learning and a lack of means to undertake it. Many believed that the idea of establishing a university was premature. Nevertheless, strong impetus came from the professional classes, particularly the legal and medical professions due to the need to provide a local means for preparing candidates in those fields. William Charles Wentworth, colonial landowner, editor and lawyer, former radical and later Whig aristocrat, played the predominant role in initiating the foundation of the University of Sydney. He gained government support and while the initial Bill to incorporate the University of Sydney failed in the Legislative Council in 1849, an Act to incorporate and endow the University of Sydney was passed on 1 October 1850.[36]

The University's structure and teaching philosophy were influenced by international debates which had occurred in Britain and North America over the preceding decades. There too, a changing social order challenged the traditional idea of universities, epitomised by Oxford and Cambridge, as the domain of the privileged classes, strongly aligned with Church and State, offering a liberal arts education focussing on the classics and mathematics. Newer institutions emerging in Durham, London, Ireland and Scotland offered a wider section of the community a non-denominational, non-residential education in fields more appropriate to the commercial, scientific and professional interests of an industrial democracy. The University of Sydney drew on aspects of the London, Irish and Scottish models in that it was a non-sectarian, non-residential teaching institution founded and endowed by the State, able to award secular degrees in Arts, Law and Medicine. While students were not required to reside in colleges, Churches were able to establish independent denominational colleges to provide accommodation for students who attended the professorial lectures of the University; in this aspect the institution was unique. Yet it also emulated the traditions of Oxford and Cambridge in its initially narrow curriculum. In its first years it taught only undergraduate Arts courses in Classics, Mathematics, Chemistry and Experimental Philosophy; Geology was added in 1870. The University's desire to emulate the traditions of learning and scholarship of the ancient British universities was expressed in its motto, adopted in 1856, "Sidere Mens Eadem Mutato", meaning, "though the constellation has changed, the spirit remains the same." Tension between adherence to tradition and the demands for a more relevant, professionally oriented institution is a recurring theme throughout the University's history and is reflected in its physical development.[37]

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[35] Clifford Turney, Ursula Bygott, Peter Chippendale, *Australia's First, A History of the University of Sydney Volume 1 1850-1939,* University of Sydney in association with Hale & Iremonger, Sydney, 1991, p.4.

[36] Turney, Bygott, Chippendale, *op. cit.,* pp.27,33-34, 52.

[37] Turney, Bygott, Chippendale, *op. cit.,* pp.7-8, 27-28, 92, 117; Rosemary Annable, Ken Cable, *Draft Heritage Register Thematic History,* 2000, paras. 1.3, 1.7, 2.5; Bertha McKenzie, *Stained Glass and Stone, The Gothic Buildings of the University of Sydney,* Sydney University Monographs, Number 5, University of Sydney, 1989,p.26.

4.2 Establishment of University at Grose Farm

The University began its teaching in 1852 with 38 students and three academic staff using a building in College Street formerly occupied by the Sydney College. In 1853 the University was able to purchase the Sydney College and its lands, however this was only intended as a temporary measure and a Senate committee was appointed to investigate a suitable site for a permanent, purpose-built university campus. F.L.S. Merewether, a member of the committee suggested vacant land at Grose Farm.[38]

It was estimated that between 120 to 150 acres would be required to accommodate the University, residences for the professors, and four colleges with grounds for students' recreation and so that each college might have a garden. In July 1854 the Senate was authorised to take possession of 120 acres of the land at Grose Farm as a site for the University and Colleges. Upon inspection, it was found that an extra 6 acres would be needed to allow the University's building plans to be realised, particularly the siting of buildings on the summit of a hill. 126 acres was formally conveyed by Deed of Grant from the Crown on 18 January 1855. The site was bounded by the Parramatta Road on the north, St. Paul's Road (Carillon Ave) on the south, Newtown Rd (City Rd) on the south-east, by a curved line of fence running from Newtown Road to the Parramatta Road and adjoining what is now Victoria Park on the east, and by Missenden Road on the west. Another 5 acres, initially dedicated for an Episcopal residence was added to the University's lands in 1856.[39] (Refer to Map C in J.F. Campbell, "Early History of Sydney University Grounds", *JRAHS*, Vol.16, Part IV, 1930, p.288.)

4.3 Initial Building Program

A Building Fund had been established in 1853, providing for £50,000,originally to be paid in instalments of £5,000 to £10,000 per annum, suggesting that a prolonged period of construction was contemplated. However, in 1855, the restrictions on the instalment amounts were waived, enabling the buildings at Grose Farm to be completed more rapidly than originally planned. While it was always intended to build on a grand scale, it was recommended that initial construction be limit to buildings that were essential for the working of the University - a library, lecture rooms, a laboratory, apartments for an office and residence for the Registrar and a room for meetings of the Senate. More elaborate parts, such as a hall 'capable of containing 2,000 persons' could be added as funds became available. The Elizabethan style of architecture was recommended as it could be extended without damaging the appearance of the whole. The committee also recommended that Mr Edmund Blacket, Colonial Architect, 'whose great ability and taste in Medieval Architecture is widely known' should be commissioned as Architect for the University.[40]

Blacket had trained as an engineer in England, later becoming a skilled draftsman and surveyor. He took a year's leave from paid employment to sketch and record details of English medieval architecture. He arrived in Sydney In November 1842, and was introduced to Dr Charles Nicholson, who became the University's first Provost. After some years Blacket established a modest architectural practice, securing the post of Diocesan Architect and earning a reputation for sound work and a remarkable knowledge of Gothic styles. In 1849 he was appointed Colonial Architect, a post which he held until 1854, when he resigned to take up the invitation to design the buildings of the University of Sydney. Blacket responded to the invitation by expressing his entire readiness to engage in this, 'most important work ever attempted in the Colony.'[41]

4.4 Great Hall and East Wing of Main Building

When Blacket laid his designs for the University buildings before the Senate in June 1854, in contrast to their initial recommendations, it was decided that a Great Hall should form part of the principal design and be constructed simultaneously with the remainder of the building. Blacket envisaged that an enclosed Quadrangle

[38]Turney, Bygott, Chippendale, *op. cit.*, pp.95, 98; Annable, Cable, *op. cit.*, Table of themes 1850-1880; Orwell & Peter Phillips Architects and Wendy Thorp, *The Main Quadrangle Conservation Plan*, commissioned by Woods Bagot Pty Ltd for the University of Sydney, 1995, p.2.

[39]Turney, Bygott, Chippendale, *op. cit.*, pp.96-97; Campbell, *op. cit.*, p.291.

[40]Turney, Bygott, Chippendale, *op. cit.*, pp.98-99.

[41]Turney, Bygott, Chippendale, *op. cit.*,pp.99-101.

would eventually be built, however the initial phase constructed to his designs comprised the Great Hall and East Wing, built between 1855 and 1863. These first buildings provided the lexicon of the rest of the Quadrangle buildings and several other substantial buildings later constructed on the campus.[42]

The design, in Gothic Revival style, was intended to create a complex that echoed the form of the great English universities and that would dominate the city, with the main building on the eastern hill and colleges to occupy the southern and western ridges. In Blacket's revised plans, one side of the Quadrangle was deleted, its compartments added to the front of the building and the size of the lecture rooms was enlarged, thereby extending the external facade to create an even more imposing and ornate appearance. It was proposed to construct an open archway under the tower, instead of a narrow doorway as originally planned so that the University buildings would command a vista of the future avenue which would lead to the affiliated colleges. Such lavish plans were made possible by the Gold Rush of 1851 which had increased the population and filled the Government's coffers.[43]

Work on ground clearing and laying part of the foundations began by January 1855. While the original plans envisaged that bricks would be used for constructing the buildings, Blacket found that the clay in the Sydney area was too light in colour to allow contrast between the dark brick wall and light stone dressings, a chief part of the style. It was therefore decided that the whole structure be built of stone, and Pyrmont stone was selected for use in the buildings. While some materials such as Caen sandstone were imported, there was extensive use of local products including timber such as Australian hardwood and cedar from the Richmond and Tweed River areas for the roof beams and other woodwork in the Great Hall.[44]

The years 1855 to 1857 represented the major period of construction. During 1855 the walls of the Great Hall were completed to a height of 21 feet. By the end of 1856 work had commenced on the whole of the eastern front, comprising five compartments: the Great Hall; the compartment between the Hall and tower; the centre tower; the compartment on the other side of the tower; and the compartment containing the laboratory at the south eastern corner of the building. [45]

The laboratory compartment was one of the first sections to be finished in late 1857. The ground floor rooms in this compartment housed the chemistry and physics laboratories as well as their instruments and storerooms. Rooms in this section of the building were also used for lectures in mathematics, chemistry and experimental physics. Also completed in 1857 was the Great Hall and the compartment between the Hall and the tower, designed to provide accommodation for the classical lectures, library, Office of the Registrar and retiring rooms for professors and undergraduates. Teaching began in the Michelmas term of 1857 though some sections were not completely finished. The remainder of the buildings were brought into use between 1857 and 1862.[46]

Between 1855 and 1863 several minor outbuildings were also built around the main buildings. These included stone-built privies and temporary structures such as stables and huts with paling and rail fences to keep out livestock which grazed in the grounds.[47]

By 1857 the Senate, faced with a shortage of funds, approached the Government for an additional grant of £30,000 to complete the entire eastern front and to erect three houses for the professors. The University faced damning criticism over the costs of the buildings which by 1859 had reached £150,000. A Select Committee of the Legislative Assembly, established in 1859 to inquire into the University considered the building grandiloquent and forced several design economies to be made. Times were now less opulent than in the gold rush days when the University was founded, and it was not until January 1859 that a grant of £10,000 was approved to complete the building, though the professors' residences were not completed. While an earthen

[42]Phillips, Thorp, *op. cit.*, p.3; Turney, Bygott, Chippendale, *op. cit.*,p.101.

[43]Annable, Cable, *op. cit.*, para. 2.2; Phillips, Thorp, *op. cit.*, p.6. Turney, Bygott, Chippendale, *op. cit.*, p.101.

[44]DPWS *op. cit*., 4726003; Turney, Bygott, Chippendale, *op. cit.*, pp.101-102; Phillips, Thorp, *op. cit.*, p.7; Bertha McKenzie, *Stained Glass and Stone, The Gothic Buildings of the University of Sydney*, Sydney University Monographs, Number 5, University of Sydney, 1989, p.12.

[45]Turney, Bygott, Chippendale, *op. cit.*, p.102; McKenzie, *op. cit.*, p.14..

[46]McKenzie, *op. cit.*, pp. 85,99.

[47]Phillips, Thorp, *op. cit.*, p.7; McKenzie, *op. cit.*, p.18.

platform for whole Quadrangle had been raised no further additions were made after 1861.[48] A plan laid before the Senate in 1857 shows the entire Quadrangle outlined as well as the planned professors' residences to the north of the main buildings, with plantations along Parramatta Road probably intended to provide privacy and insulation from noise.[49]

The buildings were officially opened on 18 July 1859 at the Annual Commemoration, a ceremony at which degrees were conferred and an important annual event in the life of the early university. In general, the buildings were acclaimed by the press for their architectural splendour, especially the Great Hall.

In 1860 funds were used to house a collection of antiques donated by Dr Charles Nicholson, containing items from the Etruscan, Greek, Roman and Egyptian civilisations. The collection formed the basis of a museum and three rooms were prepared for its display at the southern end of the building, where it was available for public access and for the illustration of the classical lectures. This was the foundation of the Nicholson Museum.[50]

Not until 1862 did the University receive an additional grant of £5,000 to permit the completion of the tower and rendering the interior available for use. Cloisters were to extend inside the Quadrangle on all four sides, but were not built initially due to lack of funds. Turrets of the great tower were the final part of the early building to be completed in 1862. A single clock face, made by John McLeod of London was mounted on the east face of the tower. It has since been removed to the south wall of the Woolley building facing the Teacher's College. At the time of its completion, the tower was a landmark on the top of the hill. Various gargoyles and grotesques around the tower draw on local flora and fauna. The old pump in the archway was used in the early years to provide water drawn from an underground tank fed from the roof of the main building.[51]

Externally and internally the buildings reflected the founders' affection for and allegiance to a British heritage and their aspirations to follow in the tradition of the great universities of Oxford and Cambridge. The stained glass windows in the Great Hall include the Oxford, Cambridge and Royal windows, while stone carvings bear images of Queen Victoria and the Prince Consort. The initials, 'VR' for Victoria Regina, together with the royal motto and emblems such as the crown and Tudor rose occur repeatedly throughout the early buildings. The buildings were intended to be a statement of the high value to be placed on learning and the idea of the university as an ancient and influential symbol of the established order.[52]

The main entrance to the University was also intended to create an impression of grandeur. It was planned that an imposing carriageway and walkway shaded by a double avenue of trees on each side would lead up from a main gateway on the Newtown road (City Road) directly to the clock tower. While in April 1859 land from the recreation reserve adjoining the University was requested for this purpose, it was not formally dedicated until 1863 and the planting of trees did not occur until 1870.[53] (Picture in Turney et. al. Vol. 1, p.176 shows main building and entrance drive).

4.5 Development of Colleges

Between 1856 and 1876 the colleges of St Paul's , St John's and St Andrew's were built within the University grounds by the Anglican, Roman Catholic and Presbyterian churches respectively. The buildings were of stone and echoed the Gothic Revival style of the main University building. St Paul's was the first to be built between 1856 and 1859 toward the eastern side of Grose Farm near Newtown Road; followed by St John's in 1863 towards the corner of Parramatta and Missenden roads; then St Andrew's in 1876 in the south-western extremity of the University on the corner of Bligh Street (Carillon Avenue) and Missenden Road. All colleges suffered

[48] Phillips, Thorp, *op. cit.*, p.5; Turney, Bygott, Chippendale, *op. cit.*, p.102; Annable, Cable, *op. cit.*, para. 2.4.

[49] Plan titled, 'Land at Grose Farm University of Sydney' laid before Senate 1857 (SUA: Group G.074, Series 1, Folder 1).

[50] Turney, Bygott, Chippendale, *op. cit.*, p.104.

[51] Turney, Bygott, Chippendale, *op. cit.*, pp.104-105; McKenzie, *op. cit.*, pp. 18, 88-90.

[52] Turney, Bygott, Chippendale, *op. cit.*, pp.103-104, 110; Annable, Cable, *op. cit.*, para. 2.4.

[53] Turney, Bygott, Chippendale, *op. cit.*, p.102; McKenzie, *op. cit.*, pp.88-90; Annable, Cable, *op. cit.*, Table of themes 1850-1880; DPWS, *op. cit.*, Item 4726009.

from financial difficulties and lack of patronage in their early years, however St Andrews was comparatively more prosperous and provided a more collegiate atmosphere.[54]

4.6 Grounds and Sporting Facilities

The first plantings in the University grounds took place in the late 1850s and included Port Jackson Figs and pines in a large plantation which stretched along Parramatta Road from the site of the Old Geology building to the corner of City Road. Young trees for this plantation and the avenue of trees lining the main drive were raised in a nursery on the site of the present Veterinary precinct.[55]

Tradition has it that the first University sporting club formed was the football club dating from 1863. A cricket club was founded 1865 and in 1866 the Senate resolved that part of the University grounds be reserved temporarily as a cricket ground . The area chosen (now No. 1 Oval) was in a low lying part of the grounds between Orphan School Creek and the water course which fed into it on the east side and which formed the northern boundary of the grounds of St Paul's College.[56]

5. DEVELOPMENT OF MEDICINE AND THE SCIENCES 1880-1900

5.1 Expansion of Curriculum

Since the mid 1870s the Senate had agreed to the need to expand the curriculum dramatically. While classical studies continued to be highly valued, the governing body felt that 'in an industrial community the University should be more relevant to the needs of its students in preparing them for the occupations in which they would be employed.' The University wanted to provide for 'all the educated professions and for those technical occupations which are associated with science.'[57]

Melbourne University, founded in 1853 had concentrated on offering a wider range of subjects than Sydney, and by the 1860s it had a medical school; engineering and law courses; and a more 'modern' Arts curriculum. However the greater gold rush experienced in Victoria meant that Melbourne's population was larger and more diverse than Sydney's. At the University of Sydney a scheme for expansion drawn up in 1876 provided for the introduction of courses in mental philosophy, law, history and English literature; a medical school; courses in natural philosophy, mechanics, engineering, organic chemistry, metallurgy and biology during the 1880s and 1890s. However, priority was given to the establishment of the faculties of Medicine and Science.[58]

By 1880 the idea of the University had moved from that of a 'gentleman's university' to that of a 'professional university' founded on the principle of the social utility of higher learning and its availability to a wider section cross-section of society. Other measures to achieve this included the introduction of evening lectures in 1884 to enable those who worked during the day to undertake degrees part-time; then in 1886 extension lectures were introduced whereby courses were open to anyone upon payment of a fee.[59]

5.2 Challis Bequest

Major physical expansion of the University in the 1880s and 1890s was facilitated by an increase in its Government endowment, but in particular by the Challis bequest. John Henry Challis, a retired merchant and friend of Sir Charles Nicholson, had contributed funds for the stained glass windows in the Great Hall and donated the 'Royal Window' in 1859. On his death in 1880 it was revealed that he had provided for his entire estate to eventually pass to the University upon the death of his widow, with certain conditions. Challis's widow

[54]Turney, Bygott, Chippendale, *op. cit.*, pp.105-110, 162-164.

[55]Curtis, *op. cit.*, p.26.

[56]Annable, Cable, *op. cit.*, para. 2.8.6; Turney, Bygott, Chippendale, *op. cit.*, pp.137, 166; DPWS, *op. cit.*, Item 4726008.

[57]Turney, Bygott, Chippendale, *op. cit.*, pp 156-157, 170, 181.

[58]Turney, Bygott, Chippendale, *op. cit.*, pp 156-157, 170, 181; Annable, Cable, *op. cit.*, para.2.7.

[59]Turney, Bygott, Chippendale, *op. cit.*, pp 156-157, 170, 181, 189-190, 194-195; Annable, Cable, *op. cit.*, para.2.7.

died in 1884, making the funds available to the University sooner than expected. The major portion of the bequest, comprising about £200,000, was handed over to the University in early 1890; a further £25,000 was added the following year.[60]

5.3 Establishment of a Medical School

The establishment of a medical school had been one of the University's objectives since the late 1850s. In April 1873 an agreement was ratified between the University and Wesleyan and Presbyterian bodies of the Prince Alfred Hospital by which eleven acres of land at Grose Farm were to be made available for the Hospital, which was built on the western side of the campus from 1876 to 1882. Two to three of the eleven acres were to be reserved for the establishment of a Medical School in connection with the University. However, it wasn't until the early 1880s, with the promise of increased endowment and the Challis bequest that the Senate was able to hasten the School's establishment..[61]

Thomas Peter Anderson Stuart was appointed to the Chair of Anatomy and Physiology in 1882. A graduate of Edinburgh University, Anderson Stuart was held in high esteem by the leaders of the medical profession in Scotland and England. He began teaching in 1883 in a small four-roomed cottage which had been hastily constructed for the purpose on the site of what is now the Old Geology Building (A11). The building was damp and cramped as two of the rooms were used for teaching botany and zoology. Subsequently an annexe (a detached three-room range between the cottage and Parramatta Road) was built for a lecture room and dissecting room, which served until the School moved into its new building in 1889.[62][63]

The Anderson Stuart Building (F13)

Stuart soon sought Senate and Government support for increased staff and a suitable building for the Medical School as student numbers grew; in 1884 the Senate resolved that a Medical School be erected without delay. The building was designed by Colonial Architect, James Barnet, to a specific brief from an academic committee and its development was supervised by Stuart, who ensured that the building would be not only functional but stylistically impressive to rival Blacket's main buildings to reflect the high status of Medicine as a profession.[64]

The site of the School, determined in 1885, was to the south of the main buildings; its eastern facade aligned with the Great Hall. Originally a chemical department was to be built with the School but was eventually located elsewhere. It was considered essential that the new structure be in harmony with the main building and it was built in the Gothic style and clad in Perpendicular Gothic motifs taken from the main building.[65]

While presenting a striking Gothic facade, the school conformed strictly to the requirements of those who worked in it, representing a breakthrough in the University's architecture. Anderson Stuart insisted on a high degree of ventilation control as well as large rooms and twenty-foot ceilings, which were to be a feature of the building. The entry and spinal passageways of the original building are key elements in establishing the character of the place as well as providing ample circulation. [66]

The Medical School experienced remarkable growth and by 1886 there were 39 students, including 20 in first year. The building was completed externally by April 1889 and was able to be occupied, though much internal finishing and furnishing continued for the next few years. On the eastern gable a statue of Asklepios stands above a raven-like bird over which are the initials 'AS'. The bird, with a prominent beak is a reference to Anderson Stuart, who had a large pointed nose himself. Stained glass windows, made in England, depicting various figures of significance in the history of medicine, were donated by a number of individuals. Inside, the

[60] Turney, Bygott, Chippendale, *op. cit.*, pp.181-183.

[61] Turney, Bygott, Chippendale, *op. cit.*, p.211; Peter Stanbury & Julian Holland (eds.), *Mr Macleay's Celebrated Cabinet. The History of the Macleays and their Museum*, The Macleay Museum, The University of Sydney, 1988, p.65.

[62] Turney, Bygott, Chippendale, *op. cit.*, pp.212-214; James Semple Kerr, *Anderson Stuart's Medical School, A Plan for its Conservation*, Commissioned by Australian Construction Services for the University of Sydney, 1992, p.3.

[63] Turney, Bygott, Chippendale, *op. cit.*, p.212.

[64] DPWS, *op. cit.*, Item 4726007; Kerr, *op. cit.*, pp.1-2; Turney, Bygott, Chippendale, *op. cit.*, pp.214, 216-217.

[65] Kerr, *op. cit.*, pp.5-8; McKenzie, *op. cit.*, p.101.

[66] Annable Cable, *op. cit.*, para. 3.7. Kerr, *op. cit.*, pp. 5, 8-11; DPWS, *op. cit.*, Item 4726007..

corridors were lined with busts of eminent medical men, donated by benefactors. These busts, as well as paintings, carvings and other decorative elements are in keeping with the 'cult of the hero' which was a major factor in neo-classical art and British culture since the eighteenth century, providing a sense of continuity and building on the past. The exceptional scale, patterned marble paving and fine joinery were intended to reflect the status appropriate to such an institution.[67]

The Anderson Stuart Medical School was one of the first two medical schools in Australia, the other being in Melbourne; and the first to be associated with a teaching hospital. The site, architectural style and quality of workmanship and appointments, externally and internally reflected the dominance and prestige of medicine as an academic discipline. This dominance was an important feature of the organisation of the University as a whole for a prolonged period.[68]

Medical School Gate Lodge (F18)
The erection of the Medical School extended the campus perimeter towards Newtown Road (City Road) and remained the only building in that area for some years. In 1898 a gate lodge was erected near the second entrance to the University from Newtown Road and is unusual in that it features Art Nouveau and Romanesque motifs whereas most gate houses in Sydney are inspired by English Gothic. This lodge was known as the Medical School lodge due to its proximity to the School and is thought to have been used for the receipt of cadavers before they were transported to the Medical School. It was subsequently extended (c. 1925) on the west side in the style of the original.[69]

5.4 The Macleay Museum

The other major building to be erected close to the main buildings, to the north-west of the Great Hall was the Macleay Museum. It was built between 1886 and 1887 to house the natural history collection of the Macleay family, accumulated over almost one hundred years and considered to be of international importance. The Hon. William Macleay, pastoralist, politician and patron of science in New South Wales, who was also a Fellow of the University Senate, proposed to present the collection to the University as soon as a suitable building be erected to receive it. The Macleay Museum was thus unique as the only building within the University to have been erected at the instigation of a private individual.[70]

It was to be constructed of non-inflammable material, possibly in response to the Garden Palace fire of 1881 which had devastated the records of the library of the Linnean Society of NSW. A leading private architect, George Allen Mansfield, was appointed to design the museum. Among the many other buildings designed by Mansfield was the Royal Prince Alfred Hospital and Darlington Public School. It was constructed predominantly of brick and iron in a simplified Gothic style, and while the bricks blended with the main University buildings, it was much less elaborate in style. It is a very early example of brick cavity-wall construction which was evolving in Australia at the time as a means of preventing the penetration of damp. The building was put to immediate temporary use for holding Civil Service and Articled Clerk's examinations. When the interior was completed in 1888, transfer of the collections began and the museum was opened to the public in 1891.[71]

5.5 'Temporary' Buildings for Sciences and Engineering

Science subjects had originally been taught as part of the Bachelor of Arts program and were mainly theoretical with only minor involvement of laboratory work. However, with the higher profile given to the sciences in response to Australia's increasing industrialisation and great mineral wealth, a Faculty of Science was

[67]Turney, Bygott, Chippendale, *op. cit.,* p. 214; Kerr, *op. cit.,* pp.11-12, 14; McKenzie, *op. cit.,* pp.101-114; DPWS, *op. cit.,* Item 4726007.

[68]Kerr, *op. cit.,* pp.23-45; DPWS, *op. cit.,* Item 4726007.

[69]DPWS, *op. cit.,* Item 4726011.

[70]Turney, Bygott, Chippendale, *op. cit.,*pp.267-268; DPWS, *op. cit.,* Item 4726005.

[71]Stanbury & Holland, *op. cit.,* pp.59-68; DPWS, *op. cit.,* Item 4726005.

established in 1882. The first engineering lectures began in 1883 and the degrees of Bachelor and Master of Engineering were introduced in 1884. From 1889 students could enter three year degree programs in science and engineering directly upon matriculation. The expanded curriculum meant that additional accommodation and equipment was required for laboratories in which lectures and practical classes could be held. From the mid 1880s to 1894 a number of new 'temporary' purpose-built facilities for professional subjects were out of sight of the main building. As they were strictly functional and made no pretensions to contribute to the University's architecture, they were 'hidden' so as not to disfigure the grand buildings of the main complex. The buildings constructed in this period formed the genesis of what was to become Science Road, lined with science facilities.[72]

Physics Laboratory (Badham Building (A16))

The first of the purpose-built facilities was the Physics Laboratory, constructed in 1886-1887. Specifications for the laboratory, its equipment and fittings were drawn up by newly appointed Professor of Physics, Richard Threlfall and designed by the Government Architect's branch. It was located adjacent to the then west gate of the University and was a single storey rendered masonry building with a slate roof. Features specific to laboratory needs included deep foundations to eliminate vibration, non-magnetic materials (evidence of both survives) and exposed surfaces for easy access. A tower with parapet to the west of the building formed the main entrance and also served a practical purpose to enable the time ball at Sydney Observatory to be viewed. Services included gas, water, steam, electricity, gas and electric lighting, air blast oxygen and vacuum pumps. A battery room was included to produce the electricity.[73]

Chemistry Laboratory (Pharmacy Building (A15))

The Chemistry Laboratory, which had originally been housed in the main buildings had moved in 1885 due to overcrowding and the danger of fire. A new facility was built in 1888-1890 adjacent to the Physics Laboratory by the Government Architect's branch under James Barnet, to the design of Archibald Liversidge, Professor of Chemistry. Liversidge also designed the fittings and equipment which represented the best in international contemporary practice in laboratory design.

Particular attention was paid to adequate ventilation and lighting.[74] The building provided,

> two laboratories for Practical Chemistry capable of accommodating over one hundred students at one time with the necessary separate rooms for spectroscope and gas analysis, balance rooms etc., and also two lecture rooms capable of seating two hundred and one hundred respectively.[75]

Additions were made between the late 1890s to 1902 and in 1905 a balance room, to Liversidge's design was added to the east side of the building.[76]

Temporary Engineering Building

Engineering had originally been housed in the main building, but moved in 1885 to temporary premises south-west of those buildings to a low white building with a verandah facing Parramatta Road where the Union now stands. One student recalled that the Engineering quarters comprised: the Professor's room, students' lunch room, lecture room, drawing office and a machine shop.[77]

School of Mines (Old Geology Building (A11))

In the 1890s, given the importance of mining in Australia, moves were made to establish a school of mines, after the commencement of lectures in mining and metallurgy. The University received a special grant of £10,000 in 1893 to establish the school. A School of Mines was erected on the site that had been occupied by

[72]Annable, Cable, *op. cit.*, Table of themes 1880-1910; Turney, Bygott, Chippendale, *op. cit.*, pp.257-265, 267-268, DPWS, *op. cit.*, Item 4726015.

[73]DPWS, *op. cit.*, Item 4726015.

[74]Turney, Bygott, Chippendale, *op. cit.*, p.268.

[75]DPWS, *op. cit.*, Item 4726020.

[76]*Ibid.*

[77]Turney, Bygott, Chippendale, *op. cit.*, pp.247-249.

the small cottage and associated building used as the temporary medical school. Plans were prepared by Government Architect in 1893 and the building was completed for use at the beginning of 1895. The School of Mines was typically functional, built of stuccoed brick and unornamented design and provided accommodation for geology, mining and mineralogy. At the back was a large lecture theatre capable of seating 250.[78]

Milling Building for Metallurgy (Bank Building (A15))

In 1899-1900 a milling building, furnace room, stack and roaster for metallurgy were built by the Government Architect's branch to the design of Professor of Chemistry, Archibald Liversidge. The former battery room of the physics laboratory was incorporated into the milling building. Both the mining and metallurgy buildings represent the expansion of the University's teaching into areas of particular relevance and concern to Australia.[79]

5.6 Student Facilities

The initial scarcity of students inhibited the growth of facilities, although there was provision for student recreation in the main building. In 1874 a debating society, the beginning of the Sydney University Union was formed and based on the Oxbridge model. However, it was predominantly a graduate organisation which met in the city; no separate facilities yet existed on the campus.[80]

During the 1880s and1890s student numbers increased as secondary education expanded and as the University extended its availability and relevance to colonial society. While numbers fell during the depression of the 1890s they quickly recovered by the turn of the century. The increase in enrolments was accompanied by a flourishing of student life with the foundation of clubs and societies and the launch of the first student magazine, *Hermes*, published by the Medical Society in 1886. The student body was more articulate, concerned and united than in the early years and this gave impetus to the development of non-academic facilities.[81]

In 1884 a men's common room was provided near the main Quadrangle, however, by the late 1880s this had become inadequate with insufficient ventilation, space and furniture. In 1888 the Sydney University Association petitioned the Senate for a new suite of rooms, one of which would be allocated to the University Union for meetings. A larger weatherboard building was erected adjoining the existing common room and, while this fell short of the students' requests, it was welcomed and provided temporary relief.[82] (See Good, *Holme Sweet Holme* p.3. for picture of common rooms).

Admission of Women

In 1881 the Senate decided unanimously to admit women to the University on equal terms with men, as had occurred in Britain and other countries. The arrival of women greatly influenced the development of recreational and sporting facilities. One of the basic requirements for the admission of women was the provision of 'a suitable retiring room and other necessary conveniences set apart exclusively for female students.' The Senate intended to erect a small cottage at the rear of the main buildings, however, this did not eventuate and for the first few years after their admission, women had use of a room in the tower. In 1885 they were given partial use of a temporary weatherboard building that had been built as a laboratory for classes in practical chemistry. In 1889 this building was handed over completely to women as the 'New Ladies Common Room.' Situated in what is now the south-eastern end of the Quadrangle, the building contained a reading room, a common room used for lunches, debates and meetings, tutor's room, kitchen and a small dressing room with lockers.[83] (See Turney et. al. Vol. 1, p.313 for picture of tennis courts and women's common room. Also, Good, *Manning House*, p.3 for good picture of common room).

[78]Turney, Bygott, Chippendale, *op. cit.*, pp.250-251; DPWS, *op. cit.*, Item 4726019.

[79]DPWS, *op. cit.*, Item4726040.

[80]Annable, Cable, *op. cit.*, para. 2.8.6; Table of themes 1850-1880; Turney, Bygott, Chippendale, *op. cit.*, pp.137-138.

[81]Turney, Bygott, Chippendale, *op. cit.*, p.309.

[82]Annable, Cable, *op. cit.*, table of themes 1880-1910.; Turney, Bygott, Chippendale, *op. cit.*, pp.315-316.

[83]Turney, Bygott, Chippendale, *op. cit.*, pp.183-185.

A college for women was established in temporary premises in 1892. Women's College opened in its own building within the University grounds, near Carillon Avenue in 1894.[84] The College's first principal, Louisa MacDonald, an Englishwoman with a Master of Arts degree from the University of London, was an avid supporter of all women's activities at the University and was involved in the larger social movements for female emancipation. Under her leadership the Women's College became a central focus for feminist ideas at the University.[85] (See photo of Women's College - Turney et.al. Vol 1, p.339.)

5.7 Sporting Facilities

In the 1880s many new sporting clubs were founded, including the Boat Club in 1884 and the Athletic Club in 1885. The most successful of the new clubs was the Tennis Club, also founded in 1885. The club was allocated four grass courts where the Quadrangle was situated, close to the Men's and Ladies' common rooms, allowing the men to watch the women playing and make disparaging comments on their game. In 1887 a separate Ladies' Tennis Club was formed, the first women's sporting club at the University.[86]

Between 1884 and 1890 a cricket ground (now Oval No. 1), originally set aside in 1866, was properly formed during improvements to the University grounds carried out as part of unemployment relief works at the instigation of Chancellor, Sir William Manning. With a team of about 60 men under the supervision of the Yeoman Bedell the ground was levelled, cut back, sloped banks built, drained and turfed.[87] In 1886 new north-to-south turf wickets were laid.[88]

In 1886 the Senate constructed for the Football Club a level ground for a playing field close to the colleges midway between the Prince Alfred Hospital and the new Medical School, as it was impressed with the success of the clubs. A map of the University c. 1890s shows the Football Ground located in approximately the same area that became the Hockey Square in later years.[89] (See SUA Plan 413/165/003).

5.8 Grounds

The University grounds in the 1880s remained very rough. In the gully behind the University a creek ran through paddocks from below St Paul's College to Parramatta Road, in some places forty feet wide and eight feet deep. The greater part of the land between the University and the colleges had been let to a dairy proprietor for grazing purposes. Some students surmised that the grounds leased for grazing must have included the football field since 'the lowing herd preferred this sequestered spot to any other in their wide domain.'[90]

Improvements were made to the main approaches to the University in the 1880s with the construction of lodges and gates: Between 1883 to 1885 two lodges, for the gardener and messenger, were built. They flanked the grand drive from Newtown Road which had been planted with fig trees and aligned on the central archway of the main building. However, the road leading from the entrance was rugged and strewn with loose stones and pebbles. This track led past the partially completed front lawn to the portico of the centre tower.

Other works were carried out in the grounds during the 1890s as part of the unemployment relief scheme, involving at least 150 men. The plantation to Derwent Street was widened and more shrubs planted. On each side of the main entrance avenue fig trees were cut down; later, the pines were removed and replaced with Port Jackson Figs. Beside the main road trenches were dug for drainage and borders were planted with shrubs from the Royal Botanic Gardens and Chancellor Manning's own garden. Paling fences were replaced with iron fences. The pond at the bottom of Victoria Park that had once been a stock watering hole, was turned into a

[84] Annable, Cable, *op. cit.*, Table of themes 1880-1910.

[85] Annable, Cable, *op. cit.*, Table of themes 1880-1910; Sonja Lilienthal, *Newtown Tarts, A History of the Sydney University Women's Sports Association 1910-1995*, Allen & Unwin, St. Leonards, 1997, pp. xiv, 9-10.

[86] Turney, Bygott, Chippendale, *op. cit.*, p.312; Lilienthal, *op. cit.*, pp.3-7.

[87] DPWS, *op. cit.*, Item 4726008.

[88] Turney, Bygott, Chippendale, *op. cit.*, p.312.

[89] SUA: Plan 413/165/003, Group G.074, Series 1, Folder 1.

[90] Turney, Bygott, Chippendale, *op. cit.*, p.175.

large ornamental lake by deepening and raising the water level. A bridge across the lake carried the entrance drive up to the main buildings. Moreton Bay and Port Jackson Fig trees were planted to line the lake and Parramatta Road.[91]

6. THE VERNON AND MCRAE PERIOD 1900-POST-WW I

6.1 Overall Planning of the University

The question of an overall plan for the future development of the University had first been considered in 1891 when deliberations over possible sites for the Women's College forced the University to address its own needs for the future. While the first known plan for the completion of the Quadrangle and other buildings was prepared in November 1890 by J. L. Bruce, foreman of works in the Government Architect's Branch of the Public Works Department, it was never used. However, in 1891 Bruce was involved in assisting the Buildings, Grounds and Improvements Committee with planning. The Committee resolved to reserve the area between the proposed roadway from the Ross Street entrance and the University buildings. Bruce provided advice and pegged out sites for the Committee's deliberations. However, it was not until the early twentieth century that further thought was given to overall planning of the University.[92]

In 1904, when plans were prepared for the new Engineering School, a 'general plan prepared by the Government Architect for future extensions of the University buildings' was also submitted by the Building, Grounds and Improvements Committee to the Senate. It is not clear, however, whether the plan was for extensions to existing buildings only. In November 1907 the Government Architect was asked to prepare a 'general survey of the whole university grounds showing proposed roadways and sites that could be used for future additional buildings or extensions of existing buildings including also portions of the grounds of St Paul's and St John's colleges at present unused.' By April 1910 a general plan for the development of the University grounds had been prepared by W. L. Vernon and approved by Senate. However, no surviving drawn plans from the period 1907-1910 have been located.[93]

A plan of the whole University 'showing existing and suggested future buildings in conjunction with the layout of the grounds' was prepared in 1913 by George McRae, who succeeded Vernon as Government Architect. This plan was refined and re-drawn in 1917 by Gorrie Blair of the Government Architect's Branch. It is possible that these plans were developments of an earlier scheme.[94]

In 1914 the Buildings, Grounds and Improvements Committee turned its attention to landscaping issues and recommended that a landscape architect be engaged to advise on the best method of laying out the grounds, including sites for buildings, roads and areas for playing fields. This was the first occasion on which planning for the whole area bounded by Parramatta Road, City Road and Missenden Road was addressed. The adviser appointed was Walter Burley Griffin, who presented a master plan in 1915. The plan was considered 'an admirable harmonious scheme', however, it was criticised on the grounds of practicality and cost. While the scheme was not implemented it influenced later planners, particularly Leslie Wilkinson, who embraced parts of Griffin's plan in his work as University Architect in the 1920s.[95] A detailed analysis of the planning and built form of the University by Donald Ellsmore is presented in Section 11.

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[91]Curtis, *op. cit.*, p.34.

[92]Rosemary Annable, *A History of the Pharmacy, Badham and Bank Buildings in the Science Road precinct and of the adjacent part of the Main Quadrangle surrounding the Vice-chancellor's Garden*, for the Office of Facilities Planning, University of Sydney, 1995, pp.14-15.

[93]Annable, 'Pharmacy, Bank, Badham', p.15; Minutes of the Buildings, Grounds and Improvements Committee15 July, 1904, 7 November 1907, 21 April 1910 (SUA: G1/5/1).

[94]Annable, 'Pharmacy, Bank, Badham', p.15, plans 13 and 14. Refer to Appendix 4 for a detailed analysis of these plans.

[95]Annable, 'Pharmacy, Bank, Badham', pp.16-17.

6.2 Fisher Library and Extension of Quadrangle

Architecturally, the period from 1900 to just after World War I was characterised by the work of the Government Architect's office, first under Walter Liberty Vernon, then by his successor, George McRae. One of the first projects undertaken after 1900 was the construction of a separate purpose-built library.

By the 1880s the University's growing library was housed in various locations in the main building and there was a need to unite the collection in one place. The building of a separate library was made possible by the bequest of Thomas Fisher, a retired businessman who had lived in Darlington and frequently walked in the University grounds and attended Commemoration Day functions. In his will he bequeathed the majority of his estate of some £30,000 to be applied in 'establishing and maintaining a library for the use of the University.' Fisher died in 1884 and his bequest provided funds for book purchases and a building fund. Finally it was decided that the government would fully fund the building, leaving the Fisher Fund as a perpetual endowment for library purposes.[96]

Built between 1902 and 1909, the Fisher Library occupied part of the south side of what was to become the Quadrangle. The new library was designed by the Government Architect's branch under Walter Liberty Vernon, William Mitchell and George McRae, 'with a view to the advancement of art education of the people.' as well as for its main purpose. The ground floor accommodated the Nicholson collection; the first floor contained a large reading room for 150 readers; while a refectory and service rooms occupied the basement. Six floors of book stacks at right angles formed part of the west side of the Quadrangle. While the design followed the European Gothic tradition, the building is more ornate in its decorative carving than the first buildings as though the architect and builders tried to outdo the first great hall. The best Australian materials were used and the library featured a magnificent cedar hammer beam roof. At the time of the library's construction cedar was fast disappearing on the east coast of Australia and its use here was intended as an enduring example and memento of one of the finest and most distinctive materials of early settlement. The design places the University within the tradition of British universities, however there was also the desire to demonstrate the quality of workmanship displayed by Australian craftsmen.[97]

One aspect of the Government Architect's plan approved in 1910 involved the completion of the main Quadrangle. In 1913 building began on the south range of the main Quadrangle, the section now known as the Professorial Boardroom, with cloisters running from the eastern tower, round the south range to the north end of the book stack. By this time George McRae had succeeded Vernon as Government Architect. McRae had been Vernon's principal assistant on the library project and he continued the style and design of the earlier work. This was completed around 1918 with the Nicholson gateway and the first part of the cloisters. The vestibule and staircase were cut into the original east range. Decorations on this section of the building reflect the University's loyalty and support for the British war effort and include panels reading 'Our Navy heroes' and 'Our Army heroes' carved during WWI and bearing the dates '1914-1915' later excised.[98]

6.3 Medical School Extensions

Plans for extending the school to provide increased accommodation were made in 1906. Two extensions were completed under separate contracts between 1907 and 1912 to the design of W.L. Vernon. The first was the addition of an "L" shaped range to the north-west and was completed in 1910; the second extension involved another range to the north-east, completed in 1912. Part of the second contract for additions included a spiral staircase projected into the north courtyard and was a rare early example of the use of reinforced concrete; and a four-bay cloister leading from the future north facade across an internal courtyard to the centre of the building.[99]

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[96] Turney, Bygott, Chippendale, *op. cit.*, pp.196-197; DPWS, *op,. cit.*, Item 4726044.

[97] McKenzie, *op. cit.*, p.118; DPWS, *op,. cit.*, Item 4726044.

[98] McKenzie, *op. cit.*,p.128; Annable, Cable, Table of themes 1880-1910. & 1910-1940; Phillips, Thorp, *op. cit.*, p.4; DPWS, *op. cit.*, Item 4726045.

[99] DPWS, *op. cit.*, Item 4726007; McKenzie, *op. cit*., p.102.

Both additions harmonised with the original building, as this remained a major concern of both the Senate and Government Architect's office, however, the junction of the old and new work is deliberately discontinuous to emphasise that the new works are, in fact, additions. The dress of the walls slowly moves from the Perpendicular Gothic of the original School to later stylistic treatments, such as lower windows breaking into Elizabethan elements. On the north facade of the north range of additions, completed by 1912, the stylistic character is slightly later again: the Elizabethan of a large English country house.[100]

6.4 Expansion of Professional Education

The new century saw a continuation of the University's expansion and a strengthening of its vocational and utilitarian role. A number of new programs were introduced prior to World War I, many of which led to their own degrees, in dentistry, agricultural science, veterinary science, architecture, economics and commerce, education, and military studies. The great pastoral and agricultural expansion of the preceding decades had stimulated the need for highly trained people in agricultural and veterinary science. In particular, the experience of the disastrous drought which followed the depression of the 1890s, emphasised the importance of managing the land with care, forethought and planning. The need for veterinary training was prompted by the national economy's substantial dependence on grazing. Simultaneously, the related growth of commercial enterprises in the cities highlighted the need for people trained in commerce and economics. The generally expanded population created the need for improved and increased provision of dental, housing and educational services.[101]

By 1914 enrolments had reached 1,674. While the War slowed progress, it was not entirely halted. In fact, by 1918 enrolments had increased to 1,995, with the number of women students almost doubling to 641, while men slightly decreased in number. Staff numbers also grew from 68 to 100 full time academics and several new chairs were created, including Mechanical Engineering (1915), Architecture (1916), Pharmacology (1917) and Oriental Studies (1918).[102]

6.5 Expansion to the west of Main Buildings, down Science Road

Between 1901 and 1910 the Government Architect's office under Walter Liberty Vernon, developed a plan for the University which involved expansion to the west of the main buildings. Part of the plan included the demolition of the temporary science facilities that had been constructed in the 1880s and 1890s and an attempt to bring that part of the campus extending along Science Road, into harmony with the general design of the main complex. This represented a significant change in the perception and use of Science Road from an area in which 'temporary' facilities could be hidden to its incorporation as an integral part of the University, reflecting the ever increasing emphasis placed on the scientific and professional disciplines which were housed in that area. Science Road itself was created when the paths around the 'temporary' science buildings built between 1899 and 1916 were replaced by a straight line of road running from the Macleay Museum to a proposed entrance opposite Ross Street. Newer buildings were aligned to this frontage.[103]

Biology (Zoology (A08))

The first of the buildings designed by W.L. Vernon, which extended the campus in this area was the Biology Building, built in 1900-1903 at the western end of Science Road; It was a single-storey face brick building with a larger lecture theatre to the west; it also provided a museum for Professor Haswell's teaching collection and preparation rooms. Its entrance was on the north side so that the dominant feature of the Science Road elevation was the large laboratory with its tall, double-storey south facing windows.[104]

[100]Kerr, *op. cit.*, pp.14-17.

[101]Turney, Bygott, Chippendale, *op. cit.*, pp.346-347, 358.

[102]Turney, Bygott, Chippendale, *op. cit.*, pp.412-413; Annable, Cable, *op. cit.*, Table of themes 1910-1940.

[103]DPWS, *op. cit.*, Items 4726014 & 4726018.

[104]DPWS, *op,. cit.*, Item4726016.

Engineering School & Workshops (John Woolley Building (A20))
Construction of a new building for an Engineering School was made possible by donations from Peter Nicol Russell, who had owned his own engineering works and retired a wealthy man. He made two gifts of £50,000 to the University in 1896 and 1904, the first provided for teaching, while the second was made on condition that the Government provide £25,000 to be used for the extension of buildings and equipment of the Engineering School.[105]

The Peter Nicol Russel School of Engineering, (1906-1908) and detached workshops (1907-1909), consisted of a two-storey Federation Arts and Crafts style building constructed of face brickwork with stone dressings. This building was the first of a series of unusual and carefully detailed Federation Arts and Crafts style Science facilities to be constructed along Science Road prior to WWI by Vernon, who was one of the leading practitioners of the Arts and Crafts style. Its size reflected the strength of the three subject areas in the faculty: civil, mechanical and electrical engineering.[106]

Veterinary Science School (J. D. Stewart (B01))
This was the second in the group of Federation Arts and Crafts style brick and sandstone buildings designed by Vernon, built between 1910 and 1912. The School was situated in an area which fronted Parramatta Road near St John's College, probably chosen to provide a secure and quiet environment for the veterinary hospital where the occupants would not disturb other users of the University grounds. It contained purpose-built facilities specifically designed for the teaching of Veterinary Science and equipped with special laboratory apparatus purchased overseas. In subsequent years foundations were laid for other permanent buildings around the spacious Quadrangle, however, building activities were halted by the outbreak of WWI, and so temporary weatherboard buildings were erected instead and continued to function over many years. A lodge (B03) and observation box (B11) were added to the precinct by Leslie Wilkinson, University Architect, in 1920-1921.[107]

Agriculture (R.D. Watt Building (A04))
The Agricultural Science School was one of the last in the series of buildings designed by the Government Architect's branch prior to WWI in the Federation Arts and Crafts style. While Vernon influenced the design of the building, it was completed by George McRae. Robert Watt, who took up the first Chair of Agriculture in 1910, was also involved in designing the building. Work began on the foundations in 1911-1912 but building did not commence until 1914, was completed in 1916, but not properly equipped until 1920. It has been in continuous use by Agriculture since 1916 and has not been extensively altered.[108]

Electricity Substation
The proliferation of science laboratories in the area necessitated extensive power supplies. Around 1913 Sydney City Council erected an electric light and power substation on land between the area proposed to be used by the Department of Agriculture and Parramatta Road. The land was leased to the City Council at nominal rent for a period of 25 years. The substation and switch room is a single storey brick building with sandstone detailing, a slate roof and exposed timber eaves. It was designed using similar materials to the Science Road facilities as they were intended by Vernon, thus demonstrating the desire for architectural harmony in that area.[109]

Organic Chemistry laboratory and Applied Science Laboratory (Administration (A14))
Part of Vernon's master plan for the University involved a new physics and chemistry complex along Science Road. However the only part of this complex to be built was the Organic Chemistry and Applied Science Laboratories, to the north-east of the Chemistry Laboratory, between 1915-1917. The building, in face brick with stone detailing, consisted of two main floors and an attic. The plan for the new science complex was abandoned following the appointment of Leslie Wilkinson as University Architect in 1918.[110]

[105]Turney, Bygott, Chippendale, *op. cit.*, pp.253-254.

[106]DPWS, *op. cit.*, Item 4726014.

[107]Turney, Bygott, Chippendale, *op. cit.*, pp.360-362; DPWS, *op. cit.*, Items 4726038 & 4726023.

[108]Turney, Bygott, Chippendale, *op. cit.*, p376; Annable, Cable, *op. cit.*, para. 4.4; DPWS, *op. cit.*, Item 4726021.

[109]DPWS, *op. cit.*, Item 4726030.

[110]DPWS, *op. cit.*, Item 4726041.

Macleay Museum Extensions

Other work along the Science Road precinct completed between 1906 and 1918 involved alterations to the Macleay Museum. Almost as soon as the Museum was completed, there was pressure for it to be used by other departments. By 1907 it was partly occupied by the Geology Department. Demands for use of the building increased until 1914 when it was planned to alter the building to provide temporary accommodation for the Department of Botany; these alterations, which included a ground floor laboratory and classroom, were carried out in 1915. Between 1915 and 1918 a bridge was built over Gosper Lane, connecting the Museum to the Old Geology Building. In 1918 further alterations were made in response to demands from the departments of Geology and Botany for additional space; a series of two-storey-high columns was erected in the centre of the building and a new first floor built from gallery to gallery. A new second floor gallery was inserted and the Museum's collection moved there, accessible only by a timber staircase. The interior court was then completely lost.[111]

6.6 Establishment of Teachers' College

Since the late nineteenth century there had been concern for improved teacher training and stronger University involvement, which resulted in the establishment of Blackfriars Training College, converted from the Blackfriars school building near the University. Students could undertake two years of professional education at the College with an opportunity to graduate at the University or pursue further study. Alexander Mackie, a Scottish lecturer from Bangor University College Wales, was appointed as Principal. Mackie was made Chair of Education at the University in 1910, and in 1911 the University's Diploma in Education began, providing a one year full time program of professional training in the principles and practices of education for primary or secondary teaching for graduates in Arts or Sciences. Shortly thereafter, moves were made to have a new college built in the University grounds. A site of about 3 ½ acres was granted between the Women's college and University oval, with the land and buildings vested exclusively in the Minister for Public Instruction.[112]

Mackie was involved in planning the building with the Government Architect's branch under Vernon, and later McRae and the design was influenced by the Teachers College in Sheffield. The foundations were completed in 1913-1914, however progress was delayed by the War. Work proceeded on the eastern wing in 1916-1917 and this part was ready for occupation in 1920. Work on the second stage was not completed until March 1925 when the College was officially opened.[113]

The Old Teacher's College (A22) is a three storey Gothic Revival style building designed to complement the other brick and sandstone science faculties which lined nearby Science Road and continues the architectural vocabulary established by Vernon at the adjacent Engineering School, but lacks the elaborate stone carvings of the facilities constructed before the War. The design of the College reflects Mackie's philosophy of teacher training, combining a functional, efficient building with pleasant surroundings. Built on a square to accommodate 600 students and staff, around an inner courtyard, the College was totally self-contained with its own library and book stack, classrooms, common rooms, gymnasium, science laboratories, a large workshop in the basement for testing and design of scientific apparatus, a large assembly hall and facilities for social activities. Departmental classrooms and other facilities, including the courtyards, were segregated, men on the east side, women on the west, separated by the central block. Mackie believed that young minds should be brought into regular contact with objects of beauty and he encouraged staff to collect paintings, sculptures an objects of historical interest, which were displayed around the College in the hope that this would arouse among the students a life-long interest in cultural matters. He also attempted to beautify the surrounds of the building by carefully planned gardens. Mackie obtained permission to build six grass tennis courts on land located on the eastern side of the College, which was carried out in 1921.[114]

The new building meant that for the first time in the College's history all students and staff were brought together under one roof, enabling Mackie's vision of teacher training to be more fully realised. Staff and students could work together in a collegial atmosphere designed to serve professional, intellectual and social

[111] Stanbury & Holland, *op. cit.*, pp.68, 71; DPWS, *op. cit.*, Item 4726005.

[112] DPWS, *op. cit.*, Item 4726017; Turney, Bygott, Chippendale, *op. cit.*, pp.399-405.

[113] DPWS, *op. cit.*, Item 4726017.

[114] DPWS, *op. cit.*, Item 4726017; Brian H. Fletcher, "From Mackie to McRae, 1920-1947" in G. Boardman et. al., *Sydney Teachers College: a History 1906-1981*, Hale & Iremonger, Sydney, 1995, pp.60-61.

ends, while also sharing in the intellectual atmosphere of the University.[115] It was the first modern style teacher training institution in NSW and a leading institution in the history of the teaching profession in NSW.[116]

6.7 New Union Buildings

The flowering of student activities that had begun in the 1890s continued in the next century. Several new clubs and associations were founded including the Evening Students' Association and the Volunteer Rifle Corps in 1900; the Law Society in 1902; the Science Society in 1904 and the University Club in 1905. Wesley College was opened in 1917, so that the four religious denominations colleges now had colleges as originally planned. The increasing student numbers added to pressure on existing facilities and led to the establishment of new buildings for both the men's and women's unions.[117]

Union Building (Holme A09)

As early as 1899 it was proposal that a 'Union Building' in the style of the Oxford Union, which would 'serve as the centre of university life by providing amenities to foster social intercourse among all members of the University,' be constructed. In 1907 it was decided to fund the building from the Challis bequest. The site chosen included the site of the University's old botanical gardens adjoining Parramatta Road near the old Engineering School, which was demolished in 1910.[118]

The Union Building was built between 1910-1912 and a tea room was added in 1913. Plans for a wing which would house a dining room and kitchens were drawn up but the War delayed construction. It was the first permanent purpose-built building for the men's student union and its design and facilities, including billiards room, reading room and common room, reflected the men's club ethos of the Oxbridge Union model. The Union Hall or theatre was completed by architects, B.J. Waterhouse and H.V. Vernon, in 1916. The first stage of the building is of brick with sandstone detailing, in the Federation Arts and Crafts style with Gothic Revival style detailing, although the carved decorative detail is in Arts and Crafts / Art Nouveau style. Together with the Engineering School (John Woolley Building), Veterinary Science School and Agricultural Science School, the Union Building is part of possibly the largest collection of Federation Arts and Crafts style buildings in close proximity in Australia.[119]

The siting of the Union Building reflects Science Road's place as the hub of University life by 1917 as the majority of the student population worked in the vicinity. The Union steps were built between 1910 and 1912 from Parramatta Road, leading to the new Union Building, making Science Road the main pedestrian entrance to the University from Parramatta Road as well as a major thoroughfare.[120]

Manning House

In 1908 the Women's Association was reconstituted as the Women's Union and launched a campaign with the Women Undergraduate's Association to have a new and extensive building erected to replace the temporary wooden cottage used as a common room, which was now inadequate due to the increasing number of women students. In 1913 the Senate agreed to allocate funds for construction of a union building for women students. It was decided to name the new building 'Manning House' in tribute to the former Chancellor who had been responsible for the admission of women to the University.

A site was chosen in 1915, behind the Medical School and opposite Fisher Library near the road leading from the main entrance. Part of a design by architectural firm, Waterhouse and Vernon, was built in 1916-1917 providing a common room, reading room and assembly hall with a dining hall, committee room and second common room in a temporary weatherboard extension. The building was opened in March 1917. It is a two-storey Gothic Revival style building with sandstone dressings and eclectic detailing, thus continuing the style

[115] Fletcher, *op. cit.,* p.61.

[116] Fletcher, *op. cit.,* p.61; DPWS, *op. cit.,* Item 4726017.

[117] Annable, Cable, *op. cit.,* Table of themes 1910-1940.

[118] William Good, *Holme Sweet Holme. The Story of the Holme Building,* University of Sydney Union, Sydney, 1985, p.31.

[119] Good, *Holme Sweet Holme,* p.20.; DPWS, *op. cit.,* Item 4726036.

[120] DPWS, *op. cit.,* Item 4726018.

established in the 1850s by Blacket. The opening of Manning House revitalised the social life of women students; lectures, addresses and debates were held regularly as well as other social events. It is associated with many notable women, some of whom were commemorated in the naming of rooms in the building.[121] (See picture in Good, *Manning House* p.8.)

6.8 Women's Sporting Facilities

The development of women's sport at the University must be understood in terms of changes within the women's movement and girl's secondary schools. Between 1907 and 1910 the female students arriving at the University differed from their predecessors in sporting experience as girl's secondary schools were breaking with tradition by emphasising competitive sport rather than social pleasantry. Many of the girls matriculating were thus able to contribute to the sporting life of the University. Women's participation in sport at the University flourished in the early twentieth century and in 1910 the Sydney University Women's Sports Association (SUWSA) was founded. Shortly thereafter a campaign began for grounds and facilities for women's sports.[122]

Tennis Courts

Following its inaugural meeting on 5 August 1910, the general committee of the SUWSA appointed a special grounds committee to approach the Senate again -after previous failures - to request land on which to build tennis courts. At this time the only facilities available were tennis courts at Women's College and the use of space marked as a tennis court in the main Quadrangle with a net across it.[123]

In November 1911 the Buildings Grounds and Improvements Committee of the University recommended that three tennis courts be constructed for the women students in a position to the east of the main front and between the curved path from the Derwent St entrance and Parramatta Road (on the sloping ground in front of the main building). The Senate granted not only the land but the cost of constructing the courts and also building, plumbing and outfitting the adjoining dressing room (later known as the Clubhouse). The courts were ready for play by 1913. These were the first purpose-built sporting facilities built specifically for the use of women.[124] (See picture, Lilienthal, *Newton Tarts* p.21.)

Hockey Square

The Hockey Club was formed in 1908 and in 1914 the SUWSA began a campaign to acquire a hockey ground. The need for the ground was exacerbated by the increasing number of women entering the science and medical faculties, who had little time during the week to exercise. It was thought that a hockey ground for use of the women students would be a great asset to the SUWSA and to women's sport in general. In 1916 the Senate granted the SUWSA's application, allowing 'use of the sparse and lumpy piece of ground known as the Square, which lay between the Oval and Manning House.'[125]

Progress in developing the ground was delayed by the War, however, after WWI the SUWSA grounds committee organised the work to transform the area into a hockey square, including fencing, building, levelling, draining and top dressing. By 1921 the Hockey Square was ready for use, available at all times to the women's sports clubs, it was also hired out on Saturday afternoons to provide a further source of income to the Association. In the long vacation of 1922 a dressing shed was erected a the end of the Square nearest the Medical School to provide facilities for meetings, dressing and showering.[126] (See picture in Lilienthal, *Newtown Tarts* p.23.)

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[121]William Good, *Manning House, the Women's Preserve*, University of Sydney Union, Sydney, 1985, pp.5, 11; Turney, Bygott, Chippendale, *op. cit.*, pp.317-318; DPWS, *op. cit.*, Item 4726026.

[122]Lilienthal, *op. cit.*, p.15; Annable, Cable, *op. cit.*, Table of themes 1880-1910.

[123]Lilienthal, *op. cit.*, pp.18, 20.

[124]Lilienthal, *op. cit.*, pp. 20-21.

[125]Lilienthal, *op. cit.*, pp.21-22.

[126]Lilienthal, *op. cit.*, p.22.

7. THE WILKINSON ERA - 1920S - WWII

7.1 Recovery after WWI

Once the Spanish influenza epidemic had subsided, the University recovered quickly from World War I with a dramatic increase in enrolments, a return to normal staffing arrangements and the continuation of the building program that had been interrupted by the War. The unprecedented growth in enrolments put a strain on accommodation and teaching resources. Total student numbers in 1919 were 2,764 (2,016 men, 748 women); by 1920 the student population was 3,356, however this fell away to 2,688 in 1924. In the 1920s the University sought stability rather than expansion.[127]

7.2 Professor Leslie Wilkinson

Leslie Wilkinson was appointed to the first Chair of Architecture in 1918. Born in London in 1882 Wilkinson had trained in the School of Architecture at the Royal Academy and had studied architecture extensively in England and on the Continent. While teaching at the University College London he also carried on his own architectural practice and completed a number of important works. In 1919 Wilkinson was appointed as University Architect, and in 1920, when the School of Architecture was given faculty status, Wilkinson was elected Dean.[128] Wilkinson was instrumental in shaping the physical character and development of the University campus during the 1920s. Even into the 1930s and early 1940s, when Wilkinson no longer officially held the position of University Architect, his designs influenced subsequent buildings.

7.3 Plan for the University

In 1919 it had been agreed that Wilkinson with Assistant Professor Madsen of the School of Engineering and A.D. Craig, Lecturer in Surveying, should advise on the general layout of the University grounds. Their report was presented to the Senate in 1920 and some of the recommendations included: keeping roads narrow like park drives, planting trees, placing wires underground, providing fences and keeping out grazing animals. It also reviewed the accommodation needs of all departments and located spaces for them. However, its overriding purpose was to introduce 'a sense of unity, order, convenience and...eventually, beauty, into the University quarters treated as a whole.' This was to be achieved by establishing definite quarters or precincts for the various faculties, schools, colleges and other activities and 'to establish axes and open attractive views from many points.' Wilkinson believed that 'the peaceful order of good buildings in beautiful surroundings is of paramount importance in creating the right environment for University life.' He envisaged vistas created by carefully placed axes, with sequences of enclosed and open courts. While some of his plan was implemented, the pressures for growth in the post-World War II period meant that much of it was lost.[129]

In 1919 a six year grant of £50,000 per year was approved by the Government for additional buildings. During 1920 a sub-committee of the Senate's Buildings and Grounds Committee, which included Professor Leslie Wilkinson, recommended that the grant be spent on the following eight building projects as soon as possible to alleviate the most pressing needs for accommodation:

1. Lecture room for applied chemistry
2. New building for Department of Physics
3. Additional building for Mechanical Engineering
4. Completion of Quadrangle for administration and Arts
5. New building for the Department of Chemistry
6. Completion of gap in north end of Medical School for pharmacology
7. Department of Anatomy: Dissecting room and examination hall (for whole University)
8. Cloisters in Quadrangle.[130]

[127] Annable, Cable, *op. cit.*, paras.4.7, 4.8; Turney, Bygott, Chippendale, *op. cit.*, pp.431-432, 435, 443.

[128] Turney, Bygott, Chippendale, *op. cit.*, pp.393-395.

[129] M. Dupain, P. Johnson, G. Molnar, D. Wilkinson, *Leslie Wilkinson, A Practical Idealist,* Valadon Publishing, Sydney, 1982, pp.66-67.

[130] Annable, Cable, *op. cit.*, Table of themes 1910-1940; Turney, Bygott, Chippendale, *op. cit.*, p.443.

By 1927 the majority of the above projects had been completed except for the Chemistry Department, Anatomy facilities and cloisters. Wilkinson's work in the Quadrangle area, the Medical School and additions to the Macleay Museum were intended to preserve the integrity of those buildings and to harmonise disparate elements of various periods of architecture.[131]

Organic Chemistry Lecture Theatre (General Lecture Theatre 1 (Part A14))

The first building designed by Professor Leslie Wilkinson, was the Organic Chemistry Lecture Theatre, a narrow single storey building that forms the southern side of the Vice Chancellor's Quadrangle extending to form part of the main Quadrangle to the east. It was completed in 1922 and provided a lecture theatre to seat 300, a laboratory and research rooms. The building is an example of the incorporation of different styles of architecture, a device used by Wilkinson in a number of locations within the University to harmonise various architectural elements. The north side was of stuccoed brick with stone detailing and small paned windows like the existing Organic Chemistry building (now Administration), while the south had additional classical stone detailing and a stone parapet to be more in keeping with the proposed western gateway of the main Quadrangle. The design may have been intended to screen the older 'temporary' buildings in Science Road when viewed from the south.[132]

Main Quadrangle - North and North-West Ranges and South-West Range

The north and north-west ranges of the main Quadrangle were designed by Wilkinson in association with the firm of Wilson, Neave and Berry. Begun in 1921, the first part to be constructed was the north-west corner between the site of the proposed western tower and the west end of the Great Hall, for Arts and administration, including the Vice-Chancellor's office. The rest of the north-west corner was constructed in 1923-1924. The style of the work is very restrained in detail compared to the earlier stages of the Quadrangle. Plans for an impressive vestibule and staircase outside the Vice-Chancellor's office did not eventuate. Wilkinson also prepared several designs for the continuation of the cloisters around this part of the Quadrangle, but these were deferred due to lack of finance.[133]

While work was proceeding on the north-west corner of the main Quadrangle approval was given in November 1923 to Wilkinson's proposal to extend the 1902-1909 book stack. Work proceeded in 1926 to complete the gap between the book stack and the north-west corner to provide three floors for book stacks and accommodation in the attic level for the Faculty of Architecture. The style continues the Gothic Revival architecture established by Blacket. The scheme also included construction of the western tower, however only the west face was completed at this time due to insufficient funds. Modelled on the tower of Jesus College, Cambridge, the tower was designed to look down a long vista to the west, parallel with Science Road, part of the 1920 master plan which did not eventuate.[134]

In the 1920s an appeal had been launched for a War Memorial Carillon, which was originally planned for the clock tower, however it was subsequently decided that a separate building, a campanile, or bell tower would be more appropriate. Drawings and plans for a tentative design of the campanile were prepared by Leslie Wilkinson and John Moore. After much delay and controversy the War Memorial Carillon was installed in the tower and was inaugurated on Anzac Day 1928.[135]

Medical School Extensions

Wilkinson's extensions to the Anderson Stuart Medical School consisted of the addition of a centrepiece to in-fill the north facade and completed the north range in 1922. He used the Elizabethan Revival style of the late sixteenth century to enrich a slightly earlier Elizabethan establishment. Thus the extensions demonstrated a

[131] Annable, Cable, *op. cit.*, Table of themes 1910-1940; Phillips, Thorp, *op. cit.*, p.5.

[132] DPWS, *op. cit.*, Item 4726042.

[133] DPWS, *op. cit.*, Item 4726046.

[134] DPWS, *op. cit.*, Item 4726047.

[135] Turney, Bygott, Chippendale, *op. cit.*, pp.470-472, 483.

deliberate and progressive recapitulation of the development of English architecture from Perpendicular Gothic to late Elizabethan.[136]

Macleay Museum Extensions

Wilkinson designed a new two-storey sandstone building with a Gothic facade which was added to east end of Museum, providing a strong visual link with the Great Hall. In the process the east front of the Macleay Museum was hidden, removing its separate identity. The combined building, including the east end of the Macleay building became known as the Botany Building. A connecting archway across Science Road was only partially built in 1924-1925, leaving unfinished buttresses. The building was intended to be viewed from Parramatta Road and to screen the utilitarian Macleay Museum and provides another example of Wilkinson's plan to bring into unity disparate elements of various periods' architecture. This building, among others, brought Wilkinson into conflict with the University administration as he did not submit the plans to the Building and Grounds Committee for approval and the resulting structure provided little accommodation for considerable cost.[137]

Science Road Precinct

Part of Wilkinson's plan to bring harmony to various elements of the campus, included the modification of many of the facilities in Science Road. In this precinct, Wilkinson used his favourite 'Mediterranean' style to reface or extend buildings, partly due to the need to reduce costs by remodelling rather than building new facilities. Wilkinson's use of a Mediterranean style of architecture broke new ground in this area as Wilkinson believed that the style typified Australian conditions and wanted to implement it rather than continue the Gothic and Federation styles of existing buildings. Science Road also became part of Wilkinson's axial arrangements; the road was straightened and some buildings were re-oriented to face the road.[138]

Instead of proceeding with the construction of a new Chemistry building as per the 1920 plan, the existing laboratory was remodelled in 1923-24 with the addition of a second storey at the front and changes in fenestration at the north-east corner. The building was also stuccoed in the Mediterranean style, creating a neoclassical style frontage to Science Road.[139]

Other buildings treated in a similar fashion included the Physics Laboratory, which also had a second storey added in 1923-1925. A terracotta roof was added and a new porch, to the north-west of the tower formed an entry from Science Road.[140]

The old Geology building, which housed the School of Mines and Department of Geology, underwent alterations which included raising the roof over the centre of the building for a new lecture theatre and single-storey extensions. The front of the building was drastically altered by the replacement of the original hipped roof by three gables, the removal of the porch and the addition of a balcony.[141]

The Biology Building (Zoology) was the building most drastically altered by Wilkinson as part of his Mediterranean scheme. A second storey was added, the east end consolidated as a three-storey block and the entrance changed from the north to the south side, fronting Science Road, totally re-orienting the building, which was also stuccoed in Mediterranean style. Further additions were completed at the west end of the building in 1939-40 to designs by Wilkinson, probably as part of his 1920s scheme.[142]

Wilkinson also designed additions to the Union building in the 1920s, including kitchens behind the tea rooms in 1921. In 1923-1924 substantial dining extensions comprising a refectory, withdrawing room, bevery, kitchen and storage areas, were made by Wilkinson with Waterhouse and Lake, architects. The additions were of

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[136]Kerr, *op. cit.*, pp.14-17; DPWS, *op. cit.*, Item 4726007.

[137]Stanbury & Holland, *op. cit.*, p.71; DPWS, *op. cit.*, Item 4726037.

[138]Dupain, Johnson, Molnar & Wilkinson, *op. cit.*, p.72; Phillips, Thorp, *op. cit.*, p.5..

[139]Dupain et. al., *op. cit.*, p.72; DPWS, *op. cit.*, Item 4726020.

[140]DPWS, *op. cit.*, Item 4726015.

[141]DPWS, *op. cit.*, Item4726019.

[142]DPWS, *op. cit.*, Item 4726016.

Mediterranean style, set back from Science Road between the west end of the original Union building and Zoology and were opened in March 1924. The forecourt and loggia, built between 1939 and 1941, were part of Wilkinson's axis concept, designed to enjoy a vista across the campus, including the newly built Physics building and St Paul's College.[143]

Another characteristic of Wilkinson's architecture was his practice of re-using historical fabric. An instance of this is his incorporation of the facade of the Commercial Banking Company's George Street / Barrack Street branch, designed between 1854 and 1864, which was donated to the University in 1923. In 1923-1924 Leslie Wilkinson planned a new building linking Physics (A16) and Chemistry (A15) to provide additional accommodation for Chemistry. The original intention was to remove the furnace room and stack, previously used for metallurgy, and to make the south facade of the new building a focal point of the view from St Paul's College. However these structures were not removed. The milling building was replaced by the new link building in 1925-1928, and parts of the earlier structures may have been incorporated into the basement level or survive under the forecourt. A forecourt was created in front of the building, which is the termination of a vista from the walkway to the Union Steps. Wilkinson added timber eaves and a lantern to the roof of the building, the lantern being characteristic of his work and functioning to admit light and ventilation. The building remained unfinished for several years and the inability of the University to complete this work marked the termination of Wilkinson's employment as University Architect and reflects the financial difficulties faced by the University in the late 1920s - 1930s. A branch of the Commonwealth Bank was established in 1938.[144]

The re-siting of a pair of fluted Doric columns as pergola columns is another example of Wilkinson's re-use of historic materials in an effort to create a Mediterranean atmosphere in Science Road. It is not certain when the columns were erected, but it may have been at the same time as the re-erection of the CBC Bank in the mid-1920s.[145]

Physics Building (A28))

The Physics Building, which Wilkinson worked on in collaboration with architect, Keith Harris, represented the first major extension of the University buildings beyond the main Quadrangle and Science Road. The site chosen, in line with the 1920 master plan, belonged in part to St Paul's College. One of the conditions for the exchange of land was the retention of a direct view between the College and Science Road, necessitating the lowering of the central part of the building. A number of other modifications were necessary to limit costs which exceeded budget, however, the building was completed in 1925. The design of the building preserved St Paul's College's northern view and also created a pleasant view from Manning Road to the Physics Building, where the College can be seen nestling on the slope above. The building is of brick, rendered and painted cream, with sandstone used around the major doorways to the wings and pavilions to the east and west. The stylistic details are characteristic of Wilkinson's work, derived from Italian villas. This is the largest of the new buildings designed by Wilkinson in the distinctive Mediterranean style. The building forms a boundary to the hockey field precinct, continuing the traditional pattern of buildings surrounding grassed spaces. It is an example of the precedence Wilkinson gave to picturesque principles over functional requirements.[146]

A frieze along the central section of the Physics building acknowledged the history of physics, containing the names of former physicists from antiquity to the 1920s. Each tower contained medallions bearing likenesses of Archimedes, Galileo, Newton and Maxwell. Albert Einstein and Ernest Rutherford were invited to the opening, and while Einstein was unable to attend, Rutherford visited in September 1925.[147]

[143]DPWS, *op. cit.*, Items 4726035 & 4726036.

[144]DPWS, *op. cit.*, Item 4726040.

[145]DPWS, *op. cit.*, Item 4726022.

[146]DPWS, *op. cit.*, Item 4726013.

[147]Turney, Bygott, Chippendale, *op. cit.*, p.468.

7.4 Grounds

Vice-Chancellor's Quadrangle
As well as designing buildings, Wilkinson also played a major role in shaping the grounds of the University. His concept of small scale areas of visual interest or 'courts' is exemplified by the Vice-Chancellor's Quadrangle, plans for which were approved in 1926. Its four sides are formed by: the chemistry laboratory (1888), the organic chemistry department (1915-1917), the organic chemistry lecture theatre and laboratory (1921-1922) and the north-west corner of the main Quadrangle building. Within the Quadrangle is the balance room, built for the chemistry laboratory in about 1905. Its paths of re-used stone, probably from Darlinghurst Gaol, were laid in 1927. At the request of Vice-Chancellor, Sir Mungo MacCallum, a garden was designed by Professor Eben Gowrie Waterhouse, a staff member, linguist and camellia expert who made substantial contributions to the improvement of the campus. The garden included azaleas, fuchsias in black and white tubs, camellias, hydrangeas, oleanders and Christmas bush.[148]

Union Pleasaunce
Within the Union Building complex a courtyard was formed by extensions made during the 1920s and the area was known as the Union Pleasaunce. From 1924 until 1952 the gardens in the Pleasaunce were extensively cultivated and well maintained under the supervision of Professor E. G. Waterhouse. Over the years, however, the pressure of growing student numbers meant that the Union's building began to encroach more and more on the Pleasaunce until little of the original remained.[149]

New Entrance on Parramatta Road
In 1924 the University exchanged 7 3/4 acres of lake and main drive with the Municipal Council of Sydney for 9 acres of Victoria Park in the Eastern Avenue area as this provided more suitable land for building extensions. A condition of the exchange was that the lake remain as an ornamental feature and that the land exchanged be used by the Council for park purposes. . When the Council decided to fill the lake and chop down the Moreton Bay figs lining Parramatta Road a public outcry forced it to change its plans, however many of the trees were lopped.[150]

A new entrance gate and two-storey lodge, designed by Leslie Wilkinson in 1939-1940, were built on Parramatta Road to create a new formal entrance to the University. The new lodge is thought to have been constructed using some of the stone from the messenger's lodge, which was one of two lodges flanking the original City Road entrance, and was demolished in 1939. A single-storey bedroom extension was built on east side in 1958. Baxter's Lodge is named after the Yeoman Bedell who lived there.[151]

Other Areas
By 1925-1926 the main responsibility for the alignment of roads and planting of shrubs rested with Professors Madsen and Waterhouse. The plantings that occurred during the 1920s represented the first attempts at beautifying areas of the campus other than the main approaches. Waterhouse was responsible for many of the plantings in front of the main building and down Science Road including camellias, azaleas and Japanese Maples. He also planted white cedars, poplars, oaks and jacarandas, including the one in the Main Quadrangle; much of the work being prompted by the proposed visit of the Duke of York in 1927. Funds were provided for the improvement of paths and unemployment relief was used for works in the Main Quadrangle.[152]

[148] DPWS, *op. cit.*, Item 4726049.

[149] Good, *Holme Sweet Holme*, *op. cit.*, p.31.

[150] Turney, Bygott, Chippendale, *op. cit.*, p.469.

[151] DPWS, *op. cit.*, Item 4726009.

[152] Curtis, op. cit. p.54; Annable, 'Pharmacy, Bank, Badham,' pp.29-30

7.5 Expansion of Medical Facilities

The Faculty of Medicine had become increasingly departmentalised in the post World War I period as it became apparent that the needs of the profession and the community would be best served by the creation of clinical departments with academic heads. Four new part-time Chairs had been established between 1918 and 1922: Pharmacology (1918), Medicine (1920), Surgery (1921) and Psychiatry (1922). Other Departments to emerge or gain separate status in the 1930s included: Biochemistry, Pathology, Obstetrics and Bacteriology. Between 1928 and 1939 the Medical School experienced a period of consolidation. Generous support from the Rockefeller Foundation and George Bosch in the 1920s and 1930s ensured continuous development. In 1928 Bosch donated £250,000 for medical research, which funded Chairs in Medicine, Surgery and Bacteriology, while in 1930 the Rockefeller donation of £100,000 provided funds for laboratory facilities and helped to fund a new medical school building, a significant boost to medical facilities in a time of Depression.[153]

New Medical School / Rockefeller Foundation Building (now Blackburn Building D06)

The new building was begun in 1931 and located on a site formerly occupied by tennis courts, close to the teaching hospital, Royal Prince Alfred, to which it was connected by a covered way (since demolished). It was designed by the Government Architect and is influenced by American Art-Deco style architecture. The building is constructed on a rectangular plan with a central octagon and two light courts and housed the clinical school and research facilities with teaching laboratories and theatres for senior medical students (years 4, 5 and 6) on the west side and research laboratories on the east. The central octagon housed the library, pathology museum and animal house. It opened in 1933 and was originally known as the Rockefeller Building; the Anderson Stuart building thereafter was known as the Old Medical School. In 1941 a new post-mortem room was constructed in the basement of the new building. The building was a catalyst for future development of associated medical facilities in this area of the campus.[154]

7.6 University's Role in Research of National Importance

While the Depression of the 1930s was a blow to the University, bringing its momentum in both building activity and employment of staff to a halt due to cut backs in public funding, it withstood these years and was able to build on previous advancements in the years prior to World War II. Once prosperity returned, major growth occurred in the professional faculties and departments. As professional knowledge accumulated at an accelerated rate and as governments and the wider community began to acknowledge the practical importance of research findings, the professional disciplines experienced the need for greater compartmentalisation and specialisation. New departments and chairs had to be created and additional research became a recognised priority, necessitating a growth of facilities and staffing. Research was given a higher priority within the University and more attention was directed at post-graduate study. In the late 1920s until- 1940 Universities were increasingly being used for projects of national importance, through co-operative ventures with Commonwealth Government agencies and a number of facilities were constructed at the University of Sydney through such ventures.[155]

School of Public Health and Tropical Medicine (Ford Building (A27))

In 1925 a Federal Royal Commission on Health recommended that the Commonwealth provide a training school in health administration. Australia's proximity to Asia made it a suitable location for research and in November 1927, it was decided that a School of Preventive Medicine and Tropical Hygiene be established within the University. Under the agreement, the Commonwealth would construct and maintain the facility while the University would retain control of all academic matters and ownership of the building. The was designed by the Commonwealth Department of Works in collaboration with the Department of Health from sketches drawn by Leslie Wilkinson. It was a T-shaped building of rendered brick with stone detailing and a tower in the same style as Wilkinson's Physics building, adjacent to which it is situated. It was opened in March 1930; an animal house associated with the School was built under a separate contract in 1930.[156]

[153]Turney, Bygott, Chippendale, *op. cit.*, pp.549-555; Annable, Cable, *op. cit.*, Table of themes 1910-1940.

[154]DPWS, *op. cit.*, Item4726028.

[155]Turney, Bygott, Chippendale, *op. cit.*, pp.492-493,502, 544; Annable, Cable, *op. cit.*, para. 4.15.

[156]DPWS, *op. cit.*, Items 4726034 & 4726043.

McMaster Laboratory (B14)
The Council for Scientific and Industrial Research (CSIR) was established in 1926 to address problems of primary industry. In 1928 the CSIR recommended that a Division of Animal Health be organised and an appeal was made to the pastoral industry to share research costs with the Government. Sir Frederick McMaster, a noted pastoralist and foundation member of the State committee of CSIR, responded with an offer of £20,000 for the erection of an animal health research laboratory at Sydney University. An agreement was made between the University and the CSIR in 1929 under which the latter would fund equipment and staff. The building, designed by Samuel Lipson of the Commonwealth Department of Works was constructed facing Parramatta Road on in-filled land, where the Orphan School Creek once ran, now part of the Veterinary Science precinct. It is neoclassical in style, perhaps influenced by contemporary American designers as Lipson followed overseas trends. It also echoes the architectural vocabulary of Wilkinson-designed Science facilities in Science Road. The McMaster Laboratory gained an international reputation as a centre for research into diseases of sheep and maintained important connections with the scientific community in Australia and overseas.[157]

Madsen Building
In 1938 the CSIR, which in 1937 extended its assistance to secondary industries, agreed to locate its National Standards Laboratory at Sydney University, in accordance with the CSIR policy of establishing laboratories in different places in the Commonwealth where the necessary facilities, contacts and conditions could be found. The building was located on the ridge to the south of the main Quadrangle, attesting to its prestigious status and was designed by the Department of the Interior in simplified Gothic Revival style with sandstone facing on the eastern facade to blend with existing buildings, although the detailing and form reflects the influence of the Art Deco style. Stages 1 and 2 completed a Quadrangle and Stages 3 and 4, finished by 1944 formed a figure of eight plan. The building was named after Professor John Percival Vissing Madsen, Professor of Electrical Engineering at the University, who advocated the development of a complete range of scientific standards for Australia. It housed the National Standards Laboratory's work in meteorology, physics and electro technology and the Division of Radio physics. Many internal features were purpose-designed specifically for the Laboratory's research work and included a 130 foot tape tunnel, air conditioning to maintain a constant temperature at bench height and particular attention to electrical cabling. The Laboratory became a centre of scientific excellence. Research conducted by the Laboratory was of importance to the war effort in World War II. The building continued to be used by the CSIRO until 1979 when it was converted for University use.[158]

7.7 World War II

Development of Aeronautics
The increasing likelihood of another world war intensified the Commonwealth Government's increasing interest in scientific and industrial research. With the emphasis on defence spending directed towards air rather than naval power, the Government was faced with initiating aeronautical research, training engineers and pilots and building and maintaining aircraft. It was recommended that a Chair and Department of Aeronautics be created at a university and that the Government seek the co-operation of the universities in research and study. Both the Universities of Sydney and Melbourne had taken steps to enter the field of aeronautical studies, with facilities more fully developed in Melbourne, however the Government decided to establish the Chair in Sydney.[159]

Government funding also provided for the modification of the School of Engineering for aeronautical training. The site was excavated by Relief Labour in April 1940 and by 1944 a substantial addition of reinforced concrete with brick walls and sandstone dressings, to harmonise with the existing facades, was built across the whole south side of the original buildings to provide aerodynamics and hydrodynamics laboratories. The tower housed vertical wind tunnels.[160]

[157]DPWS, *op. cit.*, Item 4726027.

[158]DPWS, *op. cit.*, Items 4726034, 4726027, 4726029; Turney, Bygott, Chippendale, *op. cit.*, p.612.

[159]Turney, Bygott, Chippendale, *op. cit.*, pp.564-566.

[160]DPWS, *op. cit.*, Item 4726014.

University's Involvement in War

The Second World War had a far greater impact on the University than had the first. World War II depleted the student population, involved staff in major wartime research and left a physical impact on the University grounds as air raid trenches were dug around the campus. Some of the University buildings were used for war purposes, for example, the Medical School and Department of Physiology was used for the RAAF and for drug research and blood transfusions. Electrical Engineering was used for the study of radio physics; Mechanical Engineering for engineering problems. The Physics building was the scene of research for optical munitions and radio location; Zoology was used for camouflage work.[161]

Some of the colleges were also occupied by sections of the armed forces. For example a medical unit of the US Army Medical Corps was housed in St Paul's College in 1942 and the RAAF occupied the newly built Cecil Purser Wing of Wesley College in 1943.[162]

7.8 Student Facilities

Colleges

Larger enrolments following WWI meant that the colleges could expand. Improvements in grounds and interiors of the buildings were made at St Andrews College in the 1920s and 1930s. In 1925 the foundation stone was laid for a new Catholic women's college, initially as part of St John's College. It opened in 1926 and later became autonomous under the name of Sancta Sophia College.[163]

Union Building

Further extensions were made to the west end of the Union Building in the 1930s, including a ladies' retiring room, small committee room and non-members' entrance. (See picture in *Holme Sweet Holme* p. 14.) Between 1939 and 1941 an extension linking the Refectory block to the original building and 1934 extensions, consisted of a loggia in front of the Refectory with a luncheon room underneath (The Buttery); a Staff Common Room (The Cullen Room) and Strangers' Room (The MacCallum Room). The Cullen Room operated as a staff common room until 1961 when it reverted to the Union after the University's Staff Club opened.[164]

7.9 Sporting Facilities

Prior to the commencement of the 1923 academic year a clubhouse was built at the end of the Hockey Square closest to the Old Medical School. A cricket pitch was made on the square to improve the letting value of the ground and the area was also used for netball. In 1924 the area was enlarged on the northern edge and made big enough for a full sized football field and additional netball courts. In 1925, following the completion of the path to the new Physics building, high banks were built around the square; the eastern boundary was extended towards the Medical School and two terraces built at the eastern end. These terraces were later levelled and turfed to make the six tennis courts that are still in existence. In 1926, the Hockey Square was restricted to the use of women students after several cricket sixes smashed the windows of the Physics building. Constant efforts were made to improve the surface of the field and to solve drainage problems so that it could remain in regular use.[165]

In 1931 - 1932 the Women's Sports Association's basketball courts on the eastern end of the Square had to be demolished to make way for eight lawn tennis courts for the Men's Sports Union. In return, the old Hockey House was relocated to the northern bank of the Square. In October 1931 building began on a new clubhouse for the Association at the western end of the Square, the site of the current Sports Centre. The Women's Sports

[161]Annable, Cable, *op. cit.*, para.5.1; W.F. Connell, G.E. Sherrington, B.H. Fletcher, C. Turney & U. Bygott, *Australia's First, A History of the University of Sydney, Volume 2 1940-1990*, The University of Sydney in association with Hale & Iremonger, Sydney, 1995, p.11.

[162]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*,p.371.

[163]Annable, Cable, *op. cit.*, para. 4.14; Turney, Bygott, Chippendale, *op. cit.*, pp.462-465.

[164]DPWS, *op. cit.*, Item 4726036; Good, *Holme Sweet Holme*, p.15.

[165]DPWS, *op. cit.*, Item 4726025; Lilienthal, *op. cit.*, pp.35, 36.

Pavilion was officially opened in May 1932 and this new facility created a 'home' for the Association for many years. At this time the No. 2 oval was built to the north-east of the existing oval.[166]

Soil relocated from the building site of the new sports pavilion was used to elevate the eastern and southern banks of the Hockey Square to improve drainage and the entire Square was top-dressed at the same time. The number of tennis and basketball courts marked out on the Square varied greatly throughout the decade depending on the amount of water on the grounds and the demand for each sport. The Square was the scene of many inter-state and international hockey matches, including games between New South Wales and an Anglo-Scots team in 1937; the USA and England in 1938.[167]

By the beginning of World War II there were 12 member clubs in the University Sports Union, which then included baseball, boxing, golf, hockey, rifle, ski and swimming. The war period meant a falling away of competition and difficulties in obtaining new equipment. The No. 2 oval was occupied during the war by a unit of the United States Army. Some clubs closed down as members left on military service.[168]

8. THE IMPACT OF WWII - 1945 - LATE 1950S

8.1 Pressures on Accommodation

The biggest impact of the Second World War was the massive influx of students in the years immediately following the War. In 1940, 4,000 students were enrolled at the University, a record at the time, however by 1946 enrolments had doubled to 8,000, and by 1948, had almost reached 11,000. Over half the students enrolling in the immediate post-War period were ex-servicemen, who came to the University as a result of the Commonwealth Reconstruction Training Scheme, which provided subsidies for professional and vocational training for those discharged from the services. The dramatic expansion in student numbers stretched the University's resources to the limit and from 1946 it was hopelessly overcrowded and understaffed.[169]
In response to the urgent need for accommodation and limited resources available, large numbers of temporary structures were erected, which served as lecture rooms, laboratories and offices. They included a new Chemistry lecture hall described as 'a flimsy structure of corrugated fibro cement' opposite Manning House. The hall soon became popularly known as the 'Tram Shed.' Other 'transient' buildings included those for Biology laboratories (A03) near Ross Street and Biochemistry (F12).[170] Some of these buildings remain to this day.

The Commonwealth provided funding assistance for buildings and major plant necessary for Reconstruction Training. Temporary buildings were to remain the property of the Commonwealth, while permanent structures would be taken over later by the University. The Commonwealth assistance enabled construction of some permanent facilities, including a new permanent lecture theatre, opened at the beginning of the 1946 academic year and later named the Wallace Theatre (A21) in honour of the Vice-Chancellor, Sir Robert Wallace. Over the next two years further building was made possible by continued Commonwealth support. Two of the most important constructions in this period were the new Agriculture building and a new building (later known as the R. C. Mills Building), originally used for administrative purposes by the Commonwealth Office of Education, which administered the Commonwealth Scholarship Scheme then as the home of the Faculty of Economics. In 1956 a permanent wing was added to the Veterinary Science building (the McMaster Annex (B02)).[171]

The remainder of the building program during this period consisted of alterations and subdivisions to existing buildings to cope with accommodation pressures. In 1943 a new Chemistry laboratory was added in the Chemistry Building (A15). Between 1944 & 1947 additions were built to the south of Badham building. At the same a new technology department was added to south side of the Bank Building. Between 1945 and1958 the east end of the ground floor and whole of first floor of the Botany Building (Macleay Museum) was extensively subdivided. In 1952 the School of Public Health and Tropical Medicine was extended by a new wing along

166 Lilienthal, *op. cit.*, p.54; DPWS, *op. cit.*, Item 4726008.

167 Lilienthal, *op. cit.*, p.54.

168 Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*,pp.366-367.

169 Annable, Cable, *op. cit.*, paras.5.2, 5.3, 5.5; Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.32.

170 Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp.33-34, 44; Annable, Cable, *op. cit.*, para.5.5.

171 Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp.33-34; Annable, Cable, *op. cit.*, para. 5.5, Table of themes 1940-1960; DPWS, *op. cit.*, Item 4726027.

Physics Road, enclosing the north side of the original building. In 1954 additional floors were added to the museum of the Biology (Zoology) building for CSIRO use.[172]

8.2 Planning for the Future

In 1951 the State Government formally adopted the County of Cumberland Plan in which areas adjacent to the University in the suburb of Darlington were designated as special Zones for University expansion. In 1954 the Vice-Chancellor's Policy and Planning Committee considered the University's land requirements up to 1964 and indicated that it would need to acquire the area south and east of City Road up to Darlington Road, including the site of the Institute for the Deaf, Dumb and Blind Children as well as an area to the north of Parramatta Road up to Catherine and Beaver Streets. The Committee suggested that the land south of Darlington Street and east to Cleveland Street should also be acquired at a later date. The existing area of the University, excluding the colleges covered 81 acres; the proposed acquisitions would add about 69 acres to the campus, enabling the massive expansion of the University into Darlington that occurred in the 1960s and 1970s.[173]

8.3 Expansion of Administration

By the 1950s the wave of ex-service students had departed, though while total enrolments dropped, they remained at twice the pre-war level. Staff numbers began to expand as Departments grew, replacing the traditional teaching structure of a professor with a few assistants. More administrative positions were also established to support these Departments. Accommodation for staff as well as teaching and research thus became a concern. The University's own administration was also changing, with the creation of the new position of Deputy Registrar and the employment of several administrative staff in the offices of Vice-Chancellor and Registrar. In 1954 a University Archivist was appointed and in 1955 the positions of Deputy Vice-Chancellor and Assistant Principal were created. The Administration was recognised as a distinct section of the University and its strategic accommodation became a significant issue. In 1958 the former Organic Chemistry building (A14) was remodelled to accommodate Administration.[174]

8.4 War Memorial and Science Road Bridge

In 1952 it was suggested that an art gallery be established as a war memorial using funds raised during the Centenary Appeal. It was decided that this be created on a bridge, originally planned in 1890 and also part of Wilkinson's plan, but never completed, between north side of the Main Quadrangle and the east end of the Macleay Museum. Wilkinson's and Ashworth's design was amended to provide a double carriageway through the arch. Building work began in 1956 and was completed in 1958, constructed of sandstone and re-enforced concrete. It has two distinctly different facades designed to complement the adjacent buildings, providing a transition between the sandstone Gothic Revival buildings of the main precinct and the Mediterranean character that Wilkinson intended for Science Road. A bronze roll of honour was placed beside the Botany entrance. It was designed by Ashworth and Wilkinson and manufactured by Wunderlich Ltd. and includes the names of University personnel who died between September 1939 and September 1945. The Gallery's inaugural exhibition was held in 1959.[175]

8.5 Union Facilities

Extensions and alterations were essential to both the Union Building and Manning House to cope with increased student numbers and at Manning House overcrowding had become unbearable. In anticipation of an increase in the number of women attending university during the war years an extension for a dining room was completed in 1941. (See picture in Good, *Manning House*, p. 12) Updated kitchens and serveries were also provided. After these alterations men were permitted to use the dining room for afternoon tea between 3.00 p.m. and 4.30

[172]DPWS, *op. cit.*, Items 4726020, 4726015, 4726040, 4726005, 4726034, 4726016.

[173]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp.76-77.

[174]Annable, Cable, *op. cit.*, paras. 5.7, 5.10.3, 5.10.5, Table of themes 1940-1960.

[175]DPWS, *op. cit.*, Item 4726010; McKenzie, *op. cit.*, pp.141-143; Stanbury & Holland, *op. cit.*, p.71.

p.m. provided they used the garden door. After 1945 however, men were permitted to lunch in Manning House.[176]

In the Refectory of the Union Building the first of three murals by artist, Vergil Lo Schiavo was donated in 1944 and awarded the Sulman Prize for 1945; it was titled "A Tribute to Shakespeare." A second mural, " A Tribute to Dickens" was commissioned for the Western Gallery in 1951, completed in 1952. A third mural, "Mankind" was donated by the artist in 1971. Lo Schiavo had studied painting in Rome and Florence and had painted murals for banks and public buildings in Sydney before the Union gave him permission to paint the murals in the Refectory.[177]

Sports Facilities

In 1951 the Senate agreed to the introduction of a compulsory Sports Union fee for first year undergraduates, which ensured the financial viability of the sporting clubs and allowed the Sports Union to expand its facilities. A gymnasium or recreation centre and squash courts were built near Manning House and the H.K. Ward Gymnasium was completed in 1957. At this time the Sports Union maintained two ovals, eight grass tennis courts, a boatshed, squash courts, a recreation centre and the H.K. Ward Gymnasium.[178]

The post-war period was one of expansion and success in women's sports. A permanent office for the Women's Sports Association was set up in 1955 in the Guidance Hut, which contained office space for guidance counsellors appointed to advise ex-service men and women, located on Manning Road. It was moved to a position between number one and number two ovals in 1958 and remained there for the next ten years.[179] (See picture in Lilienthal, p. 72).

9. TRANSFORMATION AND EXPANSION - LATE 1950S - 1975

9.1 A Changing Curriculum

From the mid 1950s the curricula in all departments were modified, with a dramatic rise in the popularity of the social sciences, computing, applied mathematics and the performing and fine arts. There was also a broadening of interest beyond the traditional European-based scholarship to an appreciation of Asian, American and Canadian scholarly work and an interest in Asian cultures. Greater emphasis was also placed on the duty of academic staff to engage in productive research and there was a strong emphasis on postgraduate work.[180]

The significance of the sciences continued to grow during the 1950s. Following the end of World War II nations turned to the building of nuclear reactors and the use of nuclear energy in industry and in the rearming of military forces. Science was seen as the future for human development and welfare. In the era of Sputnik, plastics, antibiotics and computerisation, science was becoming an increasingly important part of life and it was seen as essential to encourage teaching and research in the various sciences.[181]

The dawning of the computer age had an important impact on the University. The Adolph Basser Computing Laboratory was established within the School of Physics in 1956 and was designed to provide a high-speed electronic digital computer and courses in its programming and operation. Basser was one of the benefactors who had presented the University with £50,000 to build the computer. A Diploma course was introduced and by 1961 research and teaching had expanded to such an extent that the laboratory was given departmental status within the School of Physics and a Chair was created in Computer Science. In 1972 the Basser Department of Computing Science was separated from the service division and moved out of the School of Physics to a new complex built in the Darlington area. In 1979 the Department itself also moved out of the Physics Building to new facilities in the Madsen Building, when it was vacated by the CSIRO.[182]

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[176]Good, *Holme Sweet Holme,* pp.15-16; Good, *Manning House,* pp.12-13.

[177]Good, *Holme Sweet Holme*, p.17.

[178]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* p.367.

[179]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* p.365; Lilienthal, *op. cit.,* p.72.

[180]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,*p.64; Annable, Cable, *op. cit.,* para. 6.5.

[181]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* p.259.

[182]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* pp.264-265.

9.2 The Changing University Environment

The late 1950s heralded an era of permanent and growing involvement of the Commonwealth and the Universities Commission in university funding following the delivery of the Murray Report of 1958 which assessed the needs of all Australian universities.[183]

During the 1960s and 1970s universities proliferated (between 1957 and 1976 the number of universities in Australia increased from 9 to 19 and the number of university students from 37,000 to 656,000). After 1965 colleges of advanced education were also created by the Commonwealth as a separate strand of higher education. The Commonwealth promoted both the universities and CAEs and both came to be extensively subsidised and almost fully funded through the Universities Commission, particularly after the abolition of student fees in 1974 and the end of the State Government's responsibility for university funding, making it a Federal responsibility. Commonwealth funding enabled the University to prepare for massive development.[184]

With growing demand for university places, a policy of restricting enrolments came into force in 1964, when faculty quotas were introduced. The selection of students was based on their marks in the secondary school Leaving Certificate examination. With the advent of the Higher School Certificate in 1967, entry pressure remained strong.[185]

9.3 New Plans for University Site Development

A committee was appointed by the Senate in 1957 to prepare a plan for the future overall development of the University site; this was presented in 1961. The committee pointed out that the existing arrangement of buildings was haphazard and uncoordinated. The plan for the future was based on the following four principles: the redesign of the University into functional precincts so that each faculty would have a recognisable area in which staff and related facilities could be conveniently found; buildings would cater for larger numbers of students on floors at or near ground level, while higher storeys would provide for small classes, seminars and staff offices; spaces around and between buildings were to be attractively landscaped and planted; and within the University grounds pedestrians were to take precedence over vehicular traffic. While some faculties such as Arts, Agriculture and Veterinary Science already occupied precincts, the major concern was that departments within existing precincts would not have adequate space to grow to accommodate the rapid expansion predicted for the 1960s.[186]

Eastern Avenue Precinct

The road which came to be known as Eastern Avenue ran beside an extensive vacant area bordering on Victoria Park and ending at the City Road gates. In 1958 it was decided that this area would be used for the construction of buildings for first-year Science courses, Geology and Geophysics and for a new library block.[187]

In 1958 a large new Chemistry School in modern architectural style was completed to the south of the Old Medical School. Professor Raymond Le Fevre, Chair of Chemistry and Head of School from 1946, and after whom the lecture theatre wing of the new building was named, contributed to its internal design. During Le Fevre's era, from 1946 to 1970 a number of specialised technical services were established in the Chemistry School and made available to other departments and research institutions. Those services, which included mass-spectrometry, polymer characterisation and helium liquefaction involved large scale advanced equipment and high level computing facilities. Between 1950 and 1990 the Chemistry School became one of the most distinguished centres of research and teaching in the University.[188] (See picture of Chemistry building Connell et. al. p. 78.)

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[183] Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*,p.57; Annable, Cable, *op. cit.*, para.5.9.

[184] Annable, Cable, *op. cit.*, para. 6.3, Table of themes 1960-1990.

[185] Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp.70-71; Annable, Cable, *op. cit.*, para. 6.4.

[186] Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.77.

[187] Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp.77-78.

[188] Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp. 254, 255-256.

In the early 1960s other science facilities were completed on the east side of Eastern Avenue including the Edgeworth David Building for Geology and Geophysics, completed in 1961. The Carslaw Building for first-year Science and Mathematics was begun in 1960 and completed in 1965, occupying the southern end of Eastern Avenue. The Stephen Roberts Theatre partly filled the space between the other two buildings by 1962.[189]

The construction of the new Fisher Library in 1961-1962 completed the Eastern Avenue precinct. Fisher was a building of striking and innovative design for which its architects were awarded the Sulman Medal and the 1962 Royal Institute of British Architects Bronze Medal. It was considered to be the first major university library in the world to have been planned simultaneously for both undergraduates and senior scholars and at the time was the largest library in the State. The five-storey undergraduate section opened in 1963, however the nine-storey book stack or research wing and final external metal cladding was not completed until 1971. While the new library was built in close proximity to the old buildings of the Quadrangle, the University encouraged the architects to pursue a design which best suited the functional requirements of the library and expressed a contemporary architectural philosophy with state-of-the-art internal features for humidity and noise control.[190]

By the mid 1970s as many departments and facilities had relocated to the south-east of the old campus or across City Road, Eastern Avenue became the University's main thoroughfare rather than Science Road. At one end was the Fisher Library and Front Lawn, while at the other was the Keith Murray footbridge, built in the 1960s, leading to the Wentworth facilities building and providing access to the increasingly busy Darlington side of the campus and Redfern railway station. The south end of Eastern Avenue was re-aligned during 1974.[191]

Main Quadrangle

Upon the opening of the new Fisher Library, the old library reading room in the Quadrangle was remodelled and named MacLaurin Hall in honour of Sir Henry Normand MacLaurin, during whose chancellorship the library was constructed. The hall was used for examinations and meetings. The book stacks were replaced by a staircase leading to a new entrance and the area remodelled to accommodate much of the History Department, which also spread into the Mungo MacCallum Building, built in 1960.[192]

In 1963 work began on construction of the Western Tower of the Quadrangle and the extension of the cloisters up to the tower. This section of the building was faced with sandstone and five bays of cloisters were added between the western tower and south-west corner to complete the Quadrangle. Wilkinson's original designs were considerably modified due to cost, much to his dismay.[193]

During the 1970s the Great Hall continued to suffer deterioration of its stonework, especially the finials at both gable ends and consideration was given to removing the entire top section of stonework, however the cost proved prohibitive. The decorative iron lacework on the ridge of the roof was removed at this time. In the early 1970s most of the gallery was rebuilt to accommodate a new organ, which had been commissioned in 1962 but was not yet installed.[194]

Arts Precinct

Three new multi-storeyed and linked buildings were erected running east-west from near the south-west corner of the main Quadrangle. Griffith Taylor, built in 1959 housed Geography, Music, Town and Country Planning and the Co-op Bookshop. Mungo MacCallum, built in 1960 housed several Arts departments, student clubs and societies and the staff club. A third building, Christopher Brennan, completed in 1967, linked the other two buildings and housed Modern Language departments and some of the History staff.[195]

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189 Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.78; Annable, Cable, *op. cit.*, Table of themes 1960-1990.

190 Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.78; "Fisher Library Sydney University," *Architecture in Australia*, December 1963, 70-75, pp.71,74.

191 Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp.78, 80; Annable, Cable, *op. cit.*, Table of themes 1960-1990.

192 McKenzie, *op. cit.*, p.118; Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.81.

193 Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.81; McKenzie, *op. cit.*, pp.138-139.

194 Phillips, Thorp, *op. cit.*, p.11.

195 Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p. 81.

Medical Precinct
The Research Institute for Mothers and Children opened in 1958 and was located behind the No. 1 Oval, not far from the precinct occupied by the Blackburn Medical School building. In the late 1960s two additional buildings, the Bosch Theatre and Bosch Building were constructed near the Medical School adjacent to the Western Avenue Underground Parking Station, which was carved out beneath the sports oval of St Andrews College. The Medical School was extended and in 1974 it was renamed the Blackburn Building.[196]

Science Road
With the anticipated removal of whole faculties into the University extension area in Darlington it was intended that Science Road was to be an Arts-Administration precinct. However, when the removal of Biological Sciences to Darlington was thwarted due to cuts in funding, existing facilities were expanded. While some provision was made for Arts subjects, Science continued to retain a large presence in Science Road.[197]

The Old Geology Building was vacated by Geology and converted for use by administration and Biological Sciences. Pharmacology occupied a new laboratory within the building. The Chemistry Building (A15) was converted for use by Pharmacy which also occupied parts of the adjacent Bank and Badham buildings. In the Veterinary Science precinct permanent buildings for the veterinary hospital and research purposes were constructed in the 1960s and 1970s, for example: the Evelyn Williams Hospital and Clinic (B10) in 1967; the R M C Gunn building for Veterinary Physiology and Animal Husbandry (B19) in 1974. Agriculture's premises were extended by a new four-storey annexe and by the J. R. McMillan building for agricultural research, which was begun in 1962. With the relocation of Engineering to a new site in Darlington in 1968 Peter Nicol Russell Engineering building was renamed the John Woolley Building and was vacated and converted for use by Arts and Agriculture. Alterations also took place in the Badham, Botany and Zoology buildings.[198]

Science Road's role as a major pedestrian entrance to the University and as the hub of University life diminished with the major shift in dynamics of the campus towards Darlington and the City Road side, the relocation of the library to Eastern Avenue and the construction of new student facilities on City Road.[199]

9.4 Extension into Darlington

In 1958 an area of some 70 acres, including a large part of the Darlington area was set aside under the Cumberland County Council Plan for 'Special Uses - Educational and Medical,' to ensure that land was available for any necessary expansion of the University into the Darlington area. The special uses zoning meant that the University became the principal buyer of land parcels when they came onto the market. Funds for land purchase came from the State Grants (Universities) Act 1958 and the Australian Universities Commission, the latter providing £400,000 for 1961-1963. In 1960 the special uses area was reduced to 35 acres, later called the University Extension Area, after opposition to the extensive purchasing program from local land owners and tenants. In 1968 the area up to Golden Grove Street was restored to the University Extension Area, and another 9 acres were added. By this time, the University had acquired about ten per cent of the area bounded by Darlington Road, Golden Grove, Abercrombie and Codrington Streets.[200]

The University's expansion into this area involved a major re-orientation of the campus and represented a departure from previous construction as for the first time, the University built a large, purpose-designed complex using state of the art architecture. In the end the new region housed a disparate collection of facilities, including modern structures, restored buildings dating from the nineteenth century and a 'tin sheds' art centre.[201]

In 1959 the first building in the University extension area in Darlington was completed for Architecture and this became the first faculty to relocate to the opposite side of City Road in 1960. The eastern section of the

[196]Annable, Cable, *op. cit.*, Table of themes 1940-1960; Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.82.
[197]DPWS, *op. cit.*, Item 4726018.
[198]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp. 80-81; DPWS, *op. cit.*, Items 4726014, 4726019, 4726020 & 4726038.
[199]DPWS, *op. cit.*, Item 4726018.
[200]Casey and Lowe, *op. cit.*, pp.10-11.
[201]Annable, Cable, *op. cit.*, para. 6.8.

Darlington area, towards Cleveland Street, was designated for development as a large Engineering precinct. In 1963 a building for Civil and Mining Engineering was established followed by Chemical Engineering in 1964; Mechanical and Aeronautical Engineering and Electrical Engineering in 1965 and the new Peter Nichol Russell Building in 1966. By 1975 the entire Engineering faculty had been relocated to new premises in Darlington.[202]

The Biochemistry Department's building (G08), begun in 1970 and completed in 1973, was located behind the Wentworth Building. A University computing centre was also developed further back in the Darlington area in 1974. The Architecture Faculty remodelled and extended its buildings, which fronted City Road, over the 1960s and early 1970s and in 1976 added a substantial new building.[203]

While many of the new facilities employed a totally new approach to design, the University also acquired some buildings in the Darlington area dating from the previous century. In an era in which an awareness of heritage issues was beginning to take hold in the community, some efforts were made to preserve parts of the older buildings acquired by the University, though sometimes this only came after community protest.

Institute Building and Curtilage

The University acquired the buildings of the Royal NSW Institute for Deaf and Blind Children, which dated from 1870, following its removal to new premises in 1962. The main building (H03) was remodelled to provide accommodation for some Faculty of Arts departments, the student medical service and later, the Department of Geography. Other University buildings were built within the original curtilage of the Institute; these include: the University Regiment and SQuadrangleron Building (H01) in 1964 and the Merewether Building (H04) in 1965, which housed the Faculty of Economics.[204]

From 1964 the Sydney University Press occupied the former Superintendent's residence (H02). This building is a two-storey bay fronted villa, typical of a suburban villa of the late 1880s, with popular decorative motifs in cast iron and render, and reflects the status associated with the position of Superintendent. The residence was probably designed by A. L. and G. McCredie who succeeded Benjamin Backhouse, the original architect, on his retirement in 1884. The residence and garden were enclosed with a dwarf stone wall and iron palisade in 1892. It was refurbished in 1990.[205]

Old Darlington School

At the end of 1975 the old Darlington School was transferred to the University. The school was designed in the late 1870s by the architect to the Council of Education, George Allen Mansfield. In 1976 several outbuildings were demolished and the site cleared in preparation for the construction of a new building for Biological Sciences, which was to relocate from Science Road. However, this plan did not eventuate when Australian University's Commission funding ended. Protests from locals and some within the University ensured that the original school building was preserved. The building was renovated for use by the Department of Music and as a theatre workshop in 1978. It now stands in a park-like setting, its original curtilage substantially altered.[206] (See picture - Connell et. al. p.82)

9.5 Student Facilities

Heavy pressure was placed upon student facilities in this period of rapid expansion and clubs proliferated. The Union became involved in the provision of a wider range of services, for example the Union Child Care Centre was established in 1970.[207]

[202]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* p.79; Annable, Cable, *op. cit.,* Table of themes 1940-1960.

[203]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,*p.79; Annable, Cable, *op. cit.,* Table of themes 1960-1990.

[204]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* pp.78-79; DPWS, *op. cit.*, Item 4726012.

[205]DPWS, *op. cit.,* Item 4726031.

[206]Sutherland, *op. cit.,* pp.11-12; DPWS, *op. cit.,* Item 4726033.

[207]Annable, Cable, *op. cit.,* Table of themes 1960-1990.

Union Building
In the early 1960s the Union extended its dining and recreational facilities along land backing onto Parramatta Road. Further extensions took place during 1961 - a third floor on the western common room block was built as an extension to the Bevery. Opened in March 1962, it was named the Buttery and the old Buttery under the Refectory converted to a Jazz Cellar. In 1966-1967 extensive remodelling of the building added greatly to its capacity. The Union was renamed the Holme Building in 1975 after Ernest Rudolph Holme, who was President of the Union at various times between 1902 and 1913.[208]

A theatre building was completed behind Union 1961, then in 1972 a footbridge was built across Parramatta Road between the theatre and Old Geology Building, to provide a safer pedestrian crossing and a link with the Mackie and Walter Selle buildings. The Union's theatre was renamed the Footbridge Theatre in 1981.[209]

Manning House
Additions completed in 1957 comprised a new room for food preparation on the main floor, a large room for members opening onto a balcony, built above the existing dining room; a food service section with a store room, wash up room and small kitchen, connected to the main dining room by a goods lift. The new rooms were built on the site of the existing sun deck and verandah, so a new sun deck was provided on the roof of the extension. The new room was named the Blackburn Room in honour of the Chancellor, Sir Charles Bickerton Blackburn.[210] (See picture in Good, *Manning House,* p. 17)

In the early 1960s during the general expansion of the University, funds were raised to complete a major extension by 1963 which included a dining room annexe, coffee lounge, meeting room, enlarged kitchen, storage and toilet facilities and an extensive balcony on the north side.[211]

Redecoration was carried out in Manning House prior to the amalgamation of the unions in 1972. Amalgamation allowed some changes in rooms' uses. On the first floor the old Secretary's Office became a small common room known as "The Women's Room." The Isabel Fidler Room was retained as a "women only" common room, however in 1973 all restrictions on access to the room were removed.[212]

In July 1974 a liquor bar opened in Manning House in the Blackburn Extension and became popularly known as the Manning Bar. The bar also serves as a venue for concerts and films.[213]

Wentworth Building
A second general facilities area for students and staff was developed on the Darlington campus in the Wentworth Building, the first stage of which was completed in 1972. From the beginning of that year, all the services provided in the three main Union buildings - the Holme Building, Manning House and the Wentworth Building - were administered by a single body, the University of Sydney Union, under which the previously separate women's and men's unions were amalgamated.[214]

Student Accommodation
The University's existing colleges were able to increase their capacity and upgrade their facilities following the Murray Committee's recommendation that Government funding be provided for colleges as well as the universities. Using both Government funding and their own resources the colleges undertook an extensive building program in the 1960s.[215]

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[208]Annable, Cable, *op. cit.,* para. 5.10.6; Good, *Holme Sweet Holme, op. cit.,* pp. 1, 22-23; Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* pp. 78, 81, 363.

[209]Good, *Holme Sweet Holme, op. cit.,* pp.22-23.

[210]Good, *Manning House,* pp.16, 19.

[211]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* p.364.

[212]Good, *Manning House,* p.27.

[213]Good, *Manning House,* p.27.

[214]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* p.78.

[215]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* p.372.

During the 1960s and 1970s the University became concerned with providing additional residential accommodation for the increasingly diverse student population which now included several overseas students. In 1964, W.A. Selle Student House (K02) was established in Arundel Street, Glebe, then[216] in 1967 a residential college, University House was opened. It had been built to a striking design facing City Road and accommodated both local and overseas students, indicating the growth and broadening of the student population. A new wing was added in 1979.[217]

Sporting Facilities

The 1960s and 1970s were years of building and modernisation as the Women's Sports Association sought to expand its future facilities. An extension to northern end of the Women's Sports Pavilion was completed in 1956 and included a new room to provide practice space for table tennis and fencing and a bigger tea room. New South Wales members of the 1956 Olympic fencing team used the Pavilion for training.[218] (See picture in Lilienthal p. 76).

Between 1957 and 1959 extensive renovations were carried out on the Tennis Shed near the women's tennis courts. The new facility, then called the Clubhouse had a larger common room, a kitchenette and, for the first time, changing rooms for men. The front verandah of the Clubhouse was incorporated into the common room and was provided with a new roof, guttering and down pipes. It has been suggested that the original Tennis Shed was the Ladies' Common Room, moved from inside the main Quadrangle, however the exterior has been greatly altered as a result of these renovations, making it difficult to tell by comparing it to photos of the Common Room.[219]

The most significant development for women's sport at the University in the 1960s was the construction of the Sports Centre. The clubhouse and dressing shed building was removed from Hockey Square in 1965 and Stage 1 of Sports Centre completed 1967. The building represented the first attempt by a university sports organisation in Australia to finance and build an indoor sports facility and demonstrated the SUWSA's evolution from being a collection of sporting clubs to an organisation offering a comprehensive physical recreation program for women. (See picture in Lilienthal p. 87).[220]

During the 1960s and 1970s efforts were directed towards the further development of indoor facilities. Stage 2 of the Sports Centre was completed in 1972 with the help of a grant from the Commonwealth's Australian Universities Commission. This section of the Centre contained two outstanding features never before built in an Australian gymnasium. The first was a huge mechanical folding door which divided the gymnasium into two; gym 2 contained permanently erected apparatus, while gym 1 could be used to host dance and other physical recreation classes as required. The second feature was the gymnastic landing pit, making the gymnasium a state of the art facility. A final addition was made in 1992. The new Sports Centre housed a large and small gymnasium, locker and changing areas, three badminton and two squash courts, table tennis and fencing rooms, a weight training room, physiotherapy clinic, common room, refreshment service and accommodation for the Association's administration.[221] (Picture in Lilienthal p.91 shows the different roof lines where Stage 1 and II are joined).

Other developments in the 1960s included the enlarging of The Hockey Square by excavating part of the Teachers' College garden and the hard tennis courts on the northern side. The remaining high ground was used to make space for two golf practice enclosures and two cricket practice wickets. In August 1965 floodlights were erected on the Square. New paths and steps were constructed to provide a more direct route to the Square from Manning House; the Teachers' College linked the high ground with the Square, which was by then used for cricket, soccer, softball and archery as well as hockey.[222]

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[216] Annable, Cable, *op. cit.*, Table of themes 1960-1990.

[217] Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.79; Annable, Cable, *op. cit.*, Table of themes 1960-1990.

[218] Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.365; Lilienthal, *op. cit.*, p.75.

[219] Lilienthal, *op. cit.*, pp. 75-76.

[220] Lilienthal, *op. cit.*, p.83.

[221] DPWS, *op. cit.*, Item 4726025; Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p. 365; Lilienthal, *op. cit.*, pp.83, 88, 91-92.

[222] Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p. 365; Lilienthal, *op. cit.*, p.86.

On the Darlington side of the campus the Noel Martin Recreation Centre with swimming pool and tennis and squash courts was completed by the early 1970s.[223]

9.6 Student Activism

The 1960s and 1970s were characterised by world-wide student activism and students at the University of Sydney became involved in protest activity. Students sought greater power within the University and protested over issues such as discrimination against Aborigines, nuclear power, censorship and the White Australia Policy. When Australia became involved in the Vietnam War and conscription was introduced protests became more intense and radical. The scene for much of the activity was the front lawn between the main Quadrangle and Fisher Library, where several meetings were held. Demonstrations were also held outside the buildings of the Sydney University Regiment. 1969 and 1970 saw the most spectacular protests at the University and in 1970 students took part in a nation-wide Moratorium, beginning and ending with gatherings on the front lawn.[224]

9.7 Grounds

During the 1950s and 1960s attempts were made at landscaping various parts of the campus however, the expansion of construction activity often meant the loss of earlier plantings. In the 1950s members of the Botany Department planted a 20 to 40 ft. wide strip of trees along the edge of Victoria Park near Eastern Avenue to provide specimens for Botany classes. This was bulldozed in the 1960s to make way for the Carslaw Building and the only surviving remnant of those plantings is a single Honey Myrtle. Prior to the construction of the new Fisher Library a large grove of trees grew on the site. Most of these were lost when the library was built, the only survivors being a pine and Moreton Bay Fig, the latter of which was labelled in 1981.[225]

In 1953 the Isabel Fidler Memorial Garden was constructed on the corner of Manning and Fisher Roads to commemorate Fidler, who had died in 1952. Fidler held the position of Tutor to Women Students since 1900 and had been actively associated with the University for most of her life as a powerful figure in the women's graduates' association and other women's organisations in Sydney. The garden was designed by Professor Denis Winston, Chair of Town and Country Planning, in the form of a small amphitheatre of lawn surrounded by yellow jasmine. The 'Chancellor's Garden' on the northern side of Fisher Library is another commemorative garden. It was opened in 1968 as a tribute to Sir Charles Blackburn, who was Chancellor from 1941 to 1964.[226]

Gardens along Eastern Avenue, which have mainly been planted since the 1960s represent a change in style from earlier gardens such as those in Science Road. Eastern Avenue plantings are characterised by a large number of natives reflecting a more modern approach to landscaping, consistent with the contemporary architectural style of that area of the campus.[227]

10. REORGANISATION OF THE UNIVERSITY SYSTEM - 1975 - PRESENT

10.1 Funding Cuts

The Universities faced difficult times from the mid 1970s due to cuts in Government funding and the abolition of undergraduate fees as well as public criticism of 'over education' and over production of Arts and Law graduates. In the Federal budget presented in August 1975 the Government suspended triennial grants. Student numbers were to be maintained at present levels but costs had to be contained and plans for new buildings were shelved. At the University of Sydney, from 1981 many staff positions were suspended or abolished and some course options removed due to financial stringency. Research activities became more selective as finance declined.[228]

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[223]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* p.79; Annable, Cable, *op. cit.,* Table of themes 1960-1990.

[224]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.,* pp.353, 355-358.

[225]Curtis, *op. cit.,* p.125, 134.

[226]Curtis, *op. cit.,*pp.135, 160; Turney, Bygott, Chippendale, *op. cit.,*p.608; Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit,* p.277.

[227]Curtis, *op. cit.,*p.124.

[228]Annable, Cable, *op. cit.,* Table of themes 1960-1990.

However, the improved facilities that had been developed during the previous twenty years, together with the provision of student grants encouraged an increase in postgraduates. Postgraduate study and teaching was further stimulated by Australia's industrial development and growing population together with employment opportunities in the new universities and CAEs. Universities also began to actively recruit fee-paying postgraduate students to compensate for cut backs in other sources of funding.[229]

10.2 Slowing of Building

Cut backs in funding from the mid 1970s meant the postponement of major projects such as the School of Biological Sciences building and stage two of the Architecture Building. While the University's existing buildings continued to undergo maintenance and repair, this work too was impeded.[230]

One major new structure that was able to be completed in 1975 was the Seymour Centre, which had been funded by a bequest from a leading city retailer, Everest York Seymour. The theatre located within the University precincts on the corner of City Road and Cleveland Street and contained three fully equipped theatres and other facilities. It was designed 'for education in and for the cultivation and performance of, musical and dramatic arts.'[231]

In 1977 a three-storey extension to the Queen Elizabeth II Research Institute for Mothers and Infants, was completed, financed by private funds. In 1978 the Madsen Building, which had housed the National Standards Laboratory, was handed over by the Commonwealth to the University and was refurbished for the Department of Education.[232]

Other works carried out in the late 1970s included reconstruction work carried out in the tower of the main Quadrangle in 1978, associated with the reinstallation of the carillon, which was recast in 1976. The Bank Building was renovated and an extension made to the Pharmacy building in 1976, which was paid for by the Bank. Around 1978 an addition was built at the south end of Pharmacy building.[233]

Following the destruction of the grandstand at No.1 Oval by fire in May 1975, the Bruce Williams Pavilion (D01) was constructed in two stages, opened in 1976 and 1978.[234]

10.3 Dawkins' Reforms

The major challenge to be faced by the universities in the 1980s came from the Minister for Education, John Dawkins' reforms, which initiated a policy of amalgamation whereby universities were joined with other tertiary institutions resulting in the creation of many more universities, rather than continuing the separation of universities and CAEs. This was offered as one of the solutions to a growing revenue shortage by the Federal Government. As a result, Sydney University became associated with the Sydney Teachers' College; the Conservatorium of Music in Sydney; the Institute of Education in Carillon Avenue; the Institute of Nursing in Mallett Street, Camperdown; the College of Health Sciences at Lidcombe and the Sydney College of the Arts at Glebe, White Bay and Balmain. These amalgamations led to a ballooning of student numbers and problems of maintaining these newly acquired facilities.[235]

In the 1980s University resources were spent on facilities at the newly acquired campuses, however provision also had to be made for construction on the traditional campus. Considerable reconstruction of older buildings occurred and, for the first time, an official policy of heritage maintenance was adopted.[236]

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[229]Annable, Cable, *op. cit.*, paras. 6.10, 6.14.

[230]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp.82-83, 382, 391.

[231]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.392.

[232]Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp. 391-392.

[233]Annable, Cable, *op. cit.*, Table of themes 1960-1990; DPWS, *op. cit.*, Item4726020.

[234]DPWS, *op. cit.*, Item 4726008.

[235]Annable, Cable, *op. cit.*, paras. 6.13, 6.14, Table of themes 1990-1999.

[236]Annable, Cable, *op. cit.*, para. 6.15.

10.4 Works on Campus - 1980s

The main works carried out in the 1980s involved completion of works in the main Quadrangle. The Great Hall was at last completed in the 1980s. In 1982 the steps into the Hall were replaced with grey trachyte. In 1983-1984 heraldic arms representing several universities were painted on the stone corbels supporting the roof. Finally, in 1984 sculptures of a male and female figure, representing the youth of the University were completed by sculptor, Tom Bass, who was commissioned by the artist Lloyd Rees to fill the empty niches on the eastern wall of the hall.[237] (See picture Connell et. al. p.450.)[238]

While Stage 2 of the Architecture Building (G04) were completed in 1984, the other works carried out on campus mainly involved renovations and modifications of existing buildings for use by different subject areas. Refurbishment and fire upgrading works took place in the Pharmacy building in the 1980s. The Mills Building was renovated for Social Work and Fine Arts in 1979 -1980; two small additional wings at right angles to the original building were designed in 1984 and 1988. Renovations were made in the Blackburn Building in 1984. Changes to lecture theatres were made in the Zoology Building in 1981 and 1988. The most recent addition to that building is an example of the continuation of the Wilkinson influence in Science Road in the 1990s. Additions for a library were made in the Badham Building in 1987. The building then provided accommodation for Psychology which also spread to parts of the Griffith Taylor and Mungo MacCallum Buildings. In 1989 a Government grant was received for renovations which mainly involved the implementation of safety projects in laboratories and upgrading of lecture theatres.[239]

Major works carried out on Union buildings included an addition to the Wentworth Building, begun in 1987. Manning House underwent a period of alteration and redecoration during the 1980s.[240]

10.5 Developments in the 1990s

By 1989 the University's enrolment had reached 19,076 student with 3,846 full time staff. The 1990s represented a period of consolidation. The size of the teaching staff continued to be reduced; research and support staff have also suffered cuts; and financial problems have slowed the development of facilities. In 1991 an over-enrolment crisis led to a more cautious approach by which enrolments were balanced against available funds.[241]

In 1990 fees were reintroduced in the form of the Higher Education Contribution Scheme, (HECS). The University also became active in seeking to recruit full-fee paying overseas students. A Community Affairs division was established to facilitate fundraising on an institution-wide scale. The search for non-government funding has placed increased pressures on the administration. Financial constraints have also reduced the depth of some research, although the range of research widened and several new centres were established including: the Women's Studies Centre; the Faculty of Health Sciences at Cumberland College and the Aboriginal Education Centre. The Government's Key Centres of Research and Training established included: the Language Acquisition Research Centre, the Australian Centre for Industrial Relations Research & Training. Collaborative research has also been undertaken with the CSIRO.[242]

In the early 1990s the major new addition to the campus was the new Education Building, constructed adjacent to the Teachers' College in 1990 - 1991. Its height was to the detriment of Wilkinson's earlier 'axis' concept, inhibiting a clear view across from the Union Refectory to St Paul's College. In 1998 a Veterinary Conference Building (B22) was completed. An Engineering link building, funded by sponsorship was built on the Darlington campus in the 1990s.[243]

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[237] Phillips, Thorp, *op. cit.*, p.12.

[238] Annable, Cable, *op. cit.*, Table of themes 1960-1990.

[239] Annable, Cable, *op. cit.*, Table of themes 1960-1990; Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, pp.80-81; DPWS, *op. cit.*, Items 4726020, 4726024, 4726016, 4762015.

[240] Annable, Cable, *op. cit.*, Table of themes 1960-1990; Good, *Manning House*, pp. 27, 29.

[241] Annable, Cable, *op. cit.*, paras. 7.1, 7.3, Table of themes 1960-1990.

[242] Annable, Cable, *op. cit.*, Table of themes 1990-1999.

[243] Annable, Cable, *op. cit.*, Table of themes 1990-1999, para. 6.15; Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.81; DPWS, *op. cit.*, Items 4726019 & 4726038.

The Anderson Stuart Building was refurbished in the early 1990s and suggestions were made for the construction of a private hospital on the campus. In 1990-1992 parts of the Macleay Museum / Botany Building were occupied by biological sciences renovated and refurbished to provide research facilities for molecular biology. In 1993 facilities were installed in the John Woolley building for the Centre for Performance Studies.[244]

Some new building took place in residential colleges and new types of student accommodation developed, for example in 1993 Darlington House opened, a new student residence funded by a levy on international student fees. There were plans for large-scale student accommodation in North Newtown. Considerable additions were made to Union buildings in the 1990s as unions consolidated their strength.[245]

The notion of the University had been transformed by the late 1990s. The acceptance among the community of tertiary education as the norm and the re-introduction of fees in the form of HECS has overturned, the idea of the University as 'elitist.' With the proliferation of universities, Sydney emerged among a small group of leaders, a long way removed from the 'gentleman's university' of the 1850s.[246]

The University's initial site at Grose Farm encompassed approximately 51 hectares in 1855. By 1990 its main site had increased to 72 hectares. In addition to the Camperdown and Darlington campus, the University possessed extensive farms and research stations for biology, astronomy, agriculture and veterinary science throughout New South Wales. In 1994 a Capital Management Plan was launched establishing priorities for capital works from 1995 to 2004, providing for $550 million to be spent over ten years; thus the University's expansion and development continues.[247]

11. SUMMARY OF PLANNING AND BUILT FORM DEVELOPMENT

The following expands on the summary of planning development provided in the text above.

The form and planning of the University was established largely in the work of the first University architects, Blacket (1852 to 1854) and Barnet (1855 to 1890), and the first University Architect, Wilkinson (1920 to 1925). Others, including the Government Architects Vernon, McRae and Evan Smith, and the Civic Planner, Burley Griffin, made significant but lesser contributions. Architects and planners responsible for the planning and design of works undertaken since World War II have made a strong visual impact without contributing in any way to the planning or design integrity of the place.

11.1 Style and Planning

Edmund Blacket established the original style of the University in the first building on the eastern row facing Sydney town. The style is usually described as Tudor Perpendicular Gothic. This style was derived from Blacket's personal knowledge of English buildings of the Tudor period and from works published in the Ecclesiologist.[248] A plan that is believed to be Blacket's original design for the University[249] illustrates a cloistered quadrangle very similar to what was effectively built in stages over the following decades. As architect also for the first college building, St Paul's, he was able to establish the Gothic style across the campus.

James Barnet worked with Blacket on the construction of the Great Hall. Later, as Colonial Architect during the 1880s, Barnet made a major contribution in the design of the Anderson Stuart building. This work, together with the earlier work by Blacket (Main Building and St Paul's College) and the architects William Wardell (St John's College) and William Munro (St Andrews College) consolidated the sandstone Gothic character and form of the early university. Barnet also planned the original Physics and Chemistry buildings, placing them out of sight

244 Annable, Cable, *op. cit.*, Table of themes 1990-1999, para. 6.15; DPWS, *op. cit.*, Items 4762005 & 4726014; Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*,p.80.

245 Annable, Cable, *op. cit.*, Table of themes 1990-1999.

246 Annable, Cable, *op. cit.*, Table of themes 1990-1999, para. 6.16.8.

247 Connell, Sherrington, Fletcher, Turney & Bygott, *op. cit.*, p.442; Annable, Cable, *op. cit.*, Table of themes 1990-1999.

248 The Ecclesiologist, published between 1842 and 1868 was one of the official organs of the 'Gothic movement' and very influential in the work of Edmund Blacket.

249 Plan titled Original Design, Sydney University, published in Art in Australia, vol. 2, 1905, p.7.

behind the eastern row, and using cheaper construction materials (mainly brick) so as to not draw attention away from the main row of sandstone buildings. These buildings were not intended to be permanent although the choice of materials and design does not suggest that they were temporary. Rather they were expedient.

Vernon and McRae, succeeding Government Architects responsible for university building, respected the design integrity of the sandstone Gothic main row although they preferred a more contemporary red brick Federation style for new buildings. They each designed major additions to the main row in complementary sandstone Tudor-Gothic detailing, and they designed new Federation Free Style face brick new buildings, placing them on the lower ground to the west, away from the more imposing sandstone Gothic eastern row.

Vernon made the first attempts to tidy up the campus through the planning of individual buildings and by the establishment of a new east west axis along which the science faculties were consolidated. The direct results of Vernon's work were limited. It took another two decades for Vernon's aims to be effected in the work of Wilkinson.

McRae laid out the first plan for the whole University site in 1913, in which he proposed new buildings in conjunction with a full layout of the grounds. His plan included demolition of Barnet's Physics and Chemistry buildings, which were to be replaced with an impressive range of Gothic style buildings, and the straightening of Science Road. The plan also included the completion of the main quadrangle, and an arch structure over Science Road to link the Macleay Building with the main quadrangle. The plan[250] was a building master plan that failed to deal with landscaping issues. It nevertheless remained in use until 1917 when it was re-drawn to include completed works and refinements in planning details.

By 1915 the University administrators sensed the need for an over-arching landscape plan and they engaged Walter Burley Griffin to prepare such a plan for the whole campus. Town planning was then a new discipline attracting attention as a result of the international competition for a design for the nation's capital. Architects from around the world presented design schemes for Canberra that were far more than just plans showing the placement of roads and buildings. A comparison between McRae's plan of 1923 and Burley Griffin's plan of 1915 clearly illustrates the progression in approach to site planning. Although Griffin's plan was not adopted, its principals were acknowledged by the University and followed quite closely by Wilkinson, who prepared a new plan for the university in 1920, which he implemented in the program of works undertaken between 1920 and 1926.

Leslie Wilkinson assumed responsibility in 1918 when he became the first Professor of Architecture. He was appointed with the clear understanding, at least on his part, that he would also take a leading role in planning the University. He was soon appointed to the role of University Architect which gave him the authority to forge ahead to mould the campus into an exciting new form, building on the ideas proposed by Burley Griffin. However Wilkinson's management of the building budget was found to be wanting and he was asked to step aside before his plans were fully implemented.

When Wilkinson was replaced as University Architect, the NSW Government Architect, Evan Smith, chose to design in the style advocated by Wilkinson and to place the next generation of buildings according to Wilkinson's general proposals. Indeed Wilkinson continued to implement his proposals in the role of consultant to Smith on some of the buildings.

World War II marked a turning point when planning appears to have been thrown out the window and new works were constructed according to ascendant need without consideration of the overall design style or the design of the whole campus. All consideration of vistas and garden planning was put aside in order to meet the accommodation crises that emerged as student numbers ballooned and the race was on to provide accommodation for enrolments that trebled between 1939 and 1945.

The explosion in enrolments coincided with major changes in the building industry, which moved rapidly from being a crafts and trades-based industry to a technology-based industry with marked visual results. The process had commenced at the end of World War I, when the loss of manpower experienced in Europe and Australia, was countered by the introduction of new building materials, such as fibrous asbestos cement sheet, that could be erected quickly with less skilled labour. The spread of the new methods between the Wars was slow due to

[250] University of Sydney Site Plan showing existing and suggested future buildings in conjunction with the lay out of the grounds. Drawn by Gorrie M. Blair and signed by George McRae, dated 3rd July 1913.

the lingering nostalgia for traditional methods but the end of World War II marked a headlong rush towards modernism when traditional building methods were cast aside in favour of the new, modern approach. Nowhere is the transition more obvious than at the University where the buildings built in the fifty years before the War are entirely different to those building in the fifty years since.

11.2 Blacket

Edmund Thomas Blacket (1817-1883) was the pre-eminent institutional designer in Sydney when, as new South Wales Colonial Architect, he was approached in 1854 to design the University. His experience with campus planning was then very limited indeed. His only large-scale works prior to designing the University were ecclesiastical. His largest secular building project had been the alterations to the Sydney Grammar School undertaken in 1855, when he was already engaged in designing and building the new university.

Notwithstanding any shortcomings in prior experience, Blacket was the most experienced designer around and he endowed the University and the City with a Gothic pile that is regarded by many as one of the great works of the Gothic Revival. However his planning did not extend beyond the main building, that was built as an 'L' shaped building with the intention of constructing a cloistered Quadrangle,[251] and a few scattered residences for gatekeepers, gardeners, messengers, professors and the University Principal. Sadly Blacket's drawings have been lost and so we must rely on reports by others to comprehend the extent of his planning intentions for the whole campus.[252] None of these refers to a total campus design.

Nevertheless, Blacket is credited with having carefully placed St Paul's College on the opposite rise from the main building with great skill.[253] An early view of the campus taken from the position of the future St Andrew's College, shows the dominance of these two imposing Gothic stone piles on opposite rises in the bare landscape.[254] Any further contribution towards the future planning of the campus appears to have been arrested by the slow growth in student numbers and in particular the painfully slow take-up of places at St Paul's College.

11.3 Barnet

James Barnet (1827 - 1904) was Colonial Architect responsible for building at the University when the next major construction on campus was considered. In 1884 he designed the Anderson Stuart Medical faculty and placed it in a position that aligned its eastern façade with the eastern façade of Blacket's Great Hall. His design for the building was chosen to be stately and sufficiently elaborate to rival, as well as complement, Blacket's main building.[255] Thus Blacket added to and reinforced the strong sandstone Gothic style of architecture on the prominent eastern row of the University.

Blacket also designed a Physics Laboratory in 1886 in conjunction with the Physics Professor, Threlfall.[256] The brick building was a functional, temporary building and it was placed on the western side of the main buildings. It had a tower, from which the Sydney Observatory time ball could be seen and various laboratories. The building was enlarged and expanded by Vernon, McRae and Wilkinson over the following decades. Barnet next designed a Chemistry laboratory in conjunction with Professor Liversidge in 1889.[257] This building was also placed to the west of the main eastern row out of view from the east.

There is no evidence that Barnet planned beyond the consolidation of the prominent eastern façade and the provision of new facilities in a subordinate style to the west of the main buildings. Nevertheless, it would be surprising if he neglected to prepare a plan for the development of the University since, as assistant to Blacket

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251 See Original Design, Sydney University, published in Art in Australia, vol. 2, 1905, p.7.

252 In 1921 Professor Leslie Wilkinson commented in an address to the Institute of Architects in Sydney that, in Blacket's day the only additional buildings contemplated appear to have been houses for professors and the Principal.

253 Architecture, April 20th, 1921. Record of a paper presented to the Institute of Architects by Prof. Leslie Wilkinson, p.108.

254 See illustration from SUA in Turney, Bygott, Chippendale et al. P. 159.

255 James Semple Kerr, Anderson Stuart's Medical School, a plan for its conservation, University of Sydney, 1992, pp. 1-2.

256 NSW PWD Plan U2/A3166.

257 NSW PWD Plan U2/A3177.

on the Great Hall, he had been there from the outset and, as Colonial Architect for thirty years from 1862, he was responsible for the University's physical form. What is more, he had laid out some very important campus-style sites at Rozelle Hospital, and at various prisons, and the Garden Palace in the Botanic Gardens amongst others. However, any plan that he might have had for the University campus has remained undiscovered.

The only other dominant building that was constructed by the University during the second phase of building, in the same year as the Anderson Stuart Building, was George Allen Mansfield's Macleay Museum on the northern flank of Blacket's main building. This brown brick building with its squat towers and coarse detailing was dismissed from the outset as a thing of little consequence. It was proposed almost from the outset to provide it with a sandstone façade in keeping with Blacket's and Barnet's buildings to the south. Meanwhile the Gothic character of the colleges was entrenched when new sandstone Gothic buildings were erected for St John's and St Andrew's.

11.4 Vernon

The next phase of development was prompted by Thomas Fisher's bequest of 1885 for the construction of a new library. The work did not commence until 1901, when Walter Liberty Vernon had taken over as Government (formerly Colonial) Architect, a position that he occupied from 1890 to 1911. Vernon's placement of the library accorded with Blacket's plan for the Quadrangle, forming its southwestern closure. It was completed in 1909.

Vernon added new facilities onto Barnet's Physics and Chemistry buildings to accommodate new facilities at the expanding university. He also designed several more buildings on campus over the next decade, placing them along the descent of the Science Road axis in an attempt to preserve the visual dominance of the Blacket/Barnet eastern row. He designed the Biology Building in 1900, the P.N. Russell Engineering Building in 1906, the Holme Building for the Union in 1910, J.D. Stewart Building for veterinary Science in 1910 and the R.D. Watt for Agriculture in 1911. The Manning (Women's Union) and Holme (Men's Union) refectory, are usually attributed to Vernon, McRae and Waterhouse, although Vernon's involvement in these lastnamed designs is not clear since they appear to have been designed after his death.

Vernon, like Barnet, had some experience in campus planning. He had laid out major hospitals for psychiatric patients at Kenmore and at Gladesville and he had planned several schools and colleges. But he did not appear to have a master plan for the University extending beyond the limited scope of the individual buildings he was designing on the eastern ridge and Science Road. However, in 1910 Vernon presented the Senate with a general plan that included completion of the Main Quadrangle, use of an area west of the main building for future expansion, demolition of the 1880s – 1890s temporary science buildings and a large new physics and chemistry complex along Science Road to be built in the style of the original buildings. The Senate adopted this plan but little subsequent progress was made with its implementation.

Vernon's work in Science road was planned about an axis at the bottom of which stood the J.B. Stewart Building, closing the vista down Science Road. The Blacket Building defined the southern boundary of Science Road at the eastern end, with The Macleay Museum opposite. The other buildings were laid out more-or-less symmetrically on both sides of Science Road.

To the south of the Anderson Stewart Building, on an axis with the Fisher Library, new buildings were planned in a dominant 'L' shape. The group across the eastern ridge forming one leg of the 'L' with the other group running at right angles down Science Road, parallel to Parramatta Road, forming the other. The plan was not inconsistent with Vernon's campus designs at Kenmore near Goulburn and at Gladesville, where there was as much symmetry as there was informality in the laying out of the vast grounds of those two large hospital complexes. In both, the emphasis was on the picturesque placement of buildings in the landscape.

11.5 McRae

George McRae succeeded Vernon as Government Architect in 1911 and continued the tradition of respectfully adding to the built form of the University. He added to the Anderson Stewart building in a matching Gothic style and he continued and completed buildings that Vernon had commenced.

In 1913 McRae prepared a master plan for the campus. The plan proposed demolition of the existing physics and chemistry laboratories (by Barnet) and the construction of the same site of an impressive range of Gothic style buildings. Science Road was to be straightened and adorned with a new archway at the eastern end running

between the Macleay Museum and the main Quadrangle. The Veterinary Science building terminated the vista down Science Road.

Another, similar plan dated 1917 drawn by Gorrie Blair,[258] illustrates the developments that had occurred since 1913 and some changes in McRae's thinking about future developments. The plan also shows a more formal approach to the roadways and pathways and the sporting fields but, curiously, not the hockey square. The plan indicates that McRae was attempting to maintain a green buffer between the colleges and the University.

11.6 Burley Griffin

In 1914 a dispute arose regarding the use of the portion of land between the Anderson Stewart Building and the Oval, now known as the 'Hockey Square' or 'Square'. As a result the Canberra-based architect, Walter Burley Griffin was consulted on the best method of laying out the University grounds; taking into account future needs for buildings, roads, playing fields and landscaping.[259] He was invited to design a plan for the campus grounds.[260] By 22nd January 1915 he had presented a provisional master plan outlining a scheme for the development and beautification of the whole site.

Walter Burley Griffin (1876 – 1937) was an architect and planner of international stature. He was trained in the office of Frank Lloyd Wright where he was very influential between 1903 and 1905, designing several of the buildings and components of buildings that are now recognised as amongst the most important designs of the modern era. He left Wright's office to practise independently and, in 1912, his design won the international design competition for a new capital city in Australia and Griffin was engaged as Federal Capital Director of Design and Construction to 1920. [261] From 1914 he worked from his Canberra base and also undertook major commissions in Sydney and elsewhere in conjunction with his architect wife, Marion who managed the Sydney practice.

Griffin's plan (see illustration) retained the dominant axial alignments of University Avenue, Eastern Avenue and Science Road and overlaid a system of circular pathways bordered with dense plantings to introduce a strong landscaped garden feeling. A new east west axis was established on the alignment of the Anderson Stuart Building and down through the disputed land, which he labelled 'campus' on the plan, and terminated, in a Quadrangle on the site of ovals. It was an ambitious plan that went a little further than had been intended by the University.

At the invitation of the Buildings and Grounds Committee Griffin continued to develop his master plan, which he presented in a final draft form three months later. It was commended as an admirable, harmonious scheme although it was not acceptable because it proposed to alter the position of the oval and it also disregarded the boundaries of the residential colleges. Accordingly Griffin was invited to amend his design.

There is no record of Griffin's amended plan, assuming that he obliged the Committee, but by mid July he was advised by letter from the Registrar that the plan would not be adopted. Nevertheless, he was advised that his plan would be kept for reference and it would be a useful guide whenever fresh buildings were considered.[262] In fact it proved to be better than that because Leslie Wilkinson, the first University Architect embraced the plan, which he considered 'showed a fine grasp of a big problem'[263] and adopted many of its principal features in the next phase of building works on campus. Wilkinson disregarded the scheme adopted in 1918[264], which showed

258 Gorrie M. Blair was an assistant architect working in the Government Architect's Branch Offices of Vernon and then McRae. He signed the 1917 drawing as Principal Design Architect.

259 SUA. Minutes of the Buildings and Grounds Committee, 11th September 1914, p.100.

260 SUA. Letter from Warden and Registrar to Griffin. Letter Book, Volume 28, No. 556, 15th September 1914.

261 The International competition for a design for Canberra was launched in 1911 and assessed in 1912. Griffin's design was the premeated design. However Griffin was required to amend and justify his proposals over a lengthy period before he was finally engaged to implement the plan.

262 Letter from Warden to Griffin. Letter Book, Volume 29, No. 349, 14th July 1915.

263 Dupain, Johnson, Molnar and Wilkinson, Leslie Wilkinson: A Practical Idealist, Valadon Publishing, Woollahra, 1982, p.66.

264. This was presumably McRae's plan dated 12 October 1917.

little attempt at a comprehensive treatment, in his opinion,[265] whereas Griffin's plan was drastic, like most good remedies,[266] and he lamented that it had not been acted upon.

11.7 Wilkinson

Leslie Wilkinson (1882-1973) took up the newly created chair of Architecture in 1918. He soon became involved in University planning issues, including master planning.

Wilkinson's comments regarding the state of the University when he arrived are revealing. He observed that the "buildings were just dotted about, and the grounds were in an extraordinary state – buildings fenced around with iron railings with horses grazing outside".[267] However his views were not all negative. He praised Blacket as having endowed the city with an architectural masterpiece and he conceded that the placement of St Paul's College was skilful.[268] He was pleased by the site, with its beautiful central valley of some 20 acres surrounded by gentle rises and he especially liked the splendid avenue of figs leading to the main building. But apart from these features he found the place to be sadly wanting.

At the time of Wilkinson's arrival the Government Architect (McRae) was still the Architect for the University. The new Professor of Architecture was a mere member of the Buildings and Grounds Committee. However, this changed when, in 1919 a recommendation was accepted by the Senate that Wilkinson, with Assistant Professor Madsen of the School of Engineering and Mr A.D. Craig, Lecturer in Surveying, should advise on the layout of the University grounds. Wilkinson also accepted responsibility for the buildings to be included in the plan, involving the expenditure of the sum of six thousand pounds over a six-year period.

At the time Wilkinson took on the assignment there was no complete survey of the grounds so the first task was to obtain such a survey as a basis for the comprehensive scheme for future development. The survey exposed the poor condition of the grounds and the haphazard placement of the buildings, confirming the need for the grounds to be properly laid out and extensive planting undertaken. Wilkinson concluded that "tar paving for footpaths should be abolished. The roadways, narrow, and of the nature of park drives, should be shaded by carefully selected trees. All electric service wires should be grounded. The whole area occupied by the University, the Colleges and the Hospital should be properly fenced on the boundary with entrances controlled by lodges. Within this area, however, the individual buildings should be unfenced. Grazing and straying animals should not be allowed".[269]

Wilkinson's plan for the University and the accompanying report were completed in January 1920. They were presented to the University Senate together with the new survey plan of the existing grounds and diagrams indicating sections to illustrate the necessary adjustments to the boundaries and levels.[270]

Wilkinson described the plan in the following terms.

> "In preparing the plan advantage has been taken of the attractive topography of the site, the lower part of the main traverse valley being retained for athletics, while the proposed new buildings are disposed in such a way as to form interesting sub-groups conforming to the contour of the ground, providing a maximum of southern lighting and securing pleasant prospects … in attacking the problem three main considerations have been kept in view: -
> - The preservation of existing buildings, roads and natural features.

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265 Architecture, April 20th, 1921. Record of a paper presented to the Institute of Architects by Prof. Leslie Wilkinson, p.109.

266 Ibid.

267 Dupain, Johnson, Molnar and Wilkinson, Leslie Wilkinson: A Practical Idealist, Valadon Publishing, Woollahra, 1982, p.62.

268 Op. Cit.

269 Architecture, April 20th, 1921. Record of a paper presented to the Institute of Architects by Prof. Leslie Wilkinson, p.109.

270 The University of Sydney, 'Report by the Sub-Committee appointed to advise on the layout of the University grounds', January 1920.

- The introduction of a sense of unity, order, convenience, and, it may be, beauty into the University quarters treated as a whole.
- The provision of centres of interest in groups of buildings devoted to related subjects of study".[271]

Wilkinson added: -

'The establishment of axis would introduce a sense of order and open up attractive views from many points. The placing of a new Science group on the south of the Medical School would complete the representation of three of the four older faculties on the main eastern terrace continued through to City Road. Thus Arts would be on the north, Science on the south, Medicine in the centre, Law being housed in the city. The other Professional Schools – ie. the Colleges, Social and Athletic activities are also grouped in definite quarters.

"Continuing the main axis of the original (Arts) building, an avenue leads down by terrace and steps past the old Science buildings and between the School of Engineering and Teachers' Training College to a court about which are grouped buildings for naval Architecture, Aviation, and a Gymnasium with baths and changing accommodation, the latter conveniently situated for the Oval and new Football grounds. These grounds it is proposed to lay out partly on the area belonging to St John's College.

"A group of new buildings, comprising a lodge and headquarters of University Scouts marks the western entrance from parramatta Road. These buildings, with suitable setting and planting, would go far to alleviate the neglected appearance of this portion of the site. It should be noted that to travellers approaching by the main western road this is the aspect of the University and city, which creates the first impression.

"On the main axis of the Medical School, extending to the western boundary, are placed in succession the Anatomical Institute, the slightly modified Hockey ground and the Oval, the two latter forming together a fine central open space devoted to athletics …

"The necessary additions to the Union and to the Zoology Department gives opportunity for an open Quadrangle with outlook across the main valley terminated by the buildings of St Paul's College on the opposite rise. On the south side of the Central Hockey Ground a low range of buildings for the Department of Physics is suggested at the foot of the rise of St Paul's meadow …

"A new pedestrian entrance from Parramatta Road is suggested. Flights of steps, having waiting shelter under, would lead up through a gateway to a small Quadrangle, one side of which is formed by the flank of the Great hall and another by an addition to the Macleay Museum Building …[272]

So described was Wilkinson's plan that gave the University much of the substantial order that lasted until the post World War II explosion of works and the indiscriminate placement of many buildings that are wholly out of scale with the Griffin/Wilkinson vision for the place. Nevertheless the strong features of Wilkinson's plan have survived to an extent that demands their retention in forward planning.

The east-west axis through the Anderson Stuart Building and the open Hockey Square is a feature of high significance, as is the view from the Refectory Building across the valley to his new Physics building and St Paul's College beyond. These have been debased by modern developments but their values remain substantially intact.

Some aspects of Wilkinson's plan could not be realised due to budget constraints and others were modified along the way, as the full costs of implementation became clearer. A crisis loomed midway through the implementation when, in 1923 Wilkinson suggested cost saving measures involving the Chemistry building. It was his aim to ensure that there would be enough money left for roads and grounds and the general setting of the University, which would otherwise remain in their existing untidy and neglected condition. He proposed to use the Commercial Banking Company's gift of their old George Street stone façade to create a link building on Science road and he also took steps to obtain stone from the old Darlinghurst Gaol for use in other structures to make substantial savings. These cost saving measures proved to be necessary. However they also highlighted an apparent mismanagement of the budget by Wilkinson, which resulted in a bitter struggle between him and the University. The Senate was obliged to seek extra government funding for building works on the strict understanding that the further works would be carried out under the supervision of the Government Architect and not by its Architect. Wilkinson's appointment as University Architect was terminated in April 1928.

271 Architecture, April 20th, 1921. Record of a paper presented to the Institute of Architects by Prof. Leslie Wilkinson, p.109.

272 Ibid., p.10.

The position of University Architect reverted to the NSW Government Architect who was at the time the first Australian-born Government Architect, Richard McDonald Seymour Wells.

Wells does not appear to have had any influence over planning at the University during his brief association. Wilkinson was able to continue building the works he had commenced, when the University obtained the additional funding, although he worked for a fee that clearly placed him in the role of a consultant. Wilkinson continued to advise the Vice-Chancellor and he represented the University in its dealings with the Commonwealth in regard to the School of Public Health, in particular its style and placement.

Seymour Wells retired from the position of Government Architect, in 1929 to be succeeded by Edwin Smith.

11.8 Edwin Smith and Cobden Parkes

Edwin Evan Smith was Government Architect with responsibility for University planning and building matters from 1929 to 1935. It was a period of great financial depression in the community, following the fall of the Lang Government in New South Wales, but it was a relatively productive period for the Government in terms of building. It was also an interesting period of transition regarding style as the Government Architect's Office began to embrace new design styles, in particular the early modern expressionism of the Dutch designers. It appears from prima facie evidence that the office might have also absorbed ideas from Wilkinson and his University buildings. There is evidence of the Mediterranean style in the design of buildings of the time and, in particular, in the design of the Quirindi Court House.

Edwin Smith arrived in Australia from Scotland and worked for the Queensland and Victorian Departments of Public Works before taking up the position in Sydney. He probably saw himself as Wilkinson's understudy at the University, at least initially. His respect for Wilkinson and Wilkinson's master planning are evident in the project to design a new medical school in conjunction with the RPA teaching hospital. The building is located in a position that was set aside by Wilkinson in his master plan for a formal garden feature and tennis courts. However it appears that the position was allocated for a building with Wilkinson's agreement since it sits within the landscaping and formal paths determined by Wilkinson and therefore accords with the plan.

The new medical school was built between 1931 and 1933 in a modern American inspired Art Deco style with funding from the Rockerfeller foundation. At the insistence of the Vice Chancellor the Foundation was persuaded to allocate additional funding for the relocation of the women's tennis courts that occupied the site of the new building. In an ironic turnaround, Smith placed the tennis courts at the eastern end of the Hockey Square, in the position that Wilkinson had allocated for a new building, and built new pavilions for tennis and the women's sports, in Wilson's preferred Mediterranean style, at the eastern and western extremities of the combined tennis and hockey fields. Clearly there was a strong synergy, at least, between the thinking of Wilkinson and Smith, even though the official record would suggest otherwise. It might have been merely due to Smith's near-retirement age or his limited background in New South Wales but he built on Wilkinson's ideas knowingly or unwittingly.

Wilkinson's shadow continued to fall over the University during and after the involvement of Smith. In 1935, when Cobden Parkes became Government Architect, changes took place in the Government Architect's Branch and during the thirties not only was there cordial consultation in which Wilkinson's opinion was sought and valued, but he himself once again did work for the University.[273]

Cobden Parkes, youngest son of Sir Henry Parkes, became Government Architect at a mature age, having served twenty years in the Branch and he remained in the position until 1958. He enlisted in 1914 and convalesced for a lengthy period before returning to architectural duties in 1920. During his time as Government Architect he fostered interest in international styles and he presided over emergency works during World War II. He then coordinated post-War Government building programs, including the erection of aluminium pre-fabricated buildings, including the temporary buildings at the University.

[273] Dupain, Johnson, Molnar and Wilkinson, Leslie Wilkinson: A Practical Idealist, Valadon Publishing, Woollahra, 1982, p.80.

11.9 After World War II

The University responded to the rapid growth in student numbers in the decade following the War by throwing up a number of buildings in lightweight and prefabricated materials, in places that had not been intended for construction hitherto. Some of those buildings are still standing. Their form and placement was utterly incongruous in the context of Wilkinson's plans to bring order and beauty to the University Campus. Indeed the Deputy Vice Chancellor, Major-general W.J.V. Windeyer observed in the 1950s, that the existing layout of the University had become haphazard and uncoordinated.[274]

In 1957 the University Senate appointed a committee to prepare a masterplan for the future development of the campus. At the time it was hoped, and expected, that substantial government assistance would be provided to the University over the following decade.

A plan was prepared in the office of the Assistant Principal W.H. Maze under the direction of the Architect-Planner, W.V. Abraham and presented in 1961. Its aim was to order the University into faculty precincts and to expand the potential of outdoor spaces created by grouping the buildings to form pleasant enclosed spaces that would be suitable for pedestrian movement. However the plan was somewhat flawed in that it failed to take into account the speed with which the University had grown during the 1950s when Departments were increasingly unable to fit into the faculty precincts. This pattern was certain to continue in the 1960s.

In 1958 the decision was taken to build on the land that bordered the western boundary of Victoria Park at the southern end, and City Road.

11.10 Expansion into Darlington

Immediately after the War it was assumed that the University would be able to expand across Parramatta into Glebe. The corresponding area across City Road (formerly Newtown Road) in Darlington was intended for a new University of Technology. However that institution was relocated to Kensington and became the University of New South Wales. The 50 acres that had been set aside in Darlington was then dedicated for the expansion of the University of Sydney and Royal Prince Alfred Hospital under the Cumberland County Plan. By 1958 the Darlington area amounted to 70 acres but this was later reduced to 35 acres following an adverse reaction from residents of the areas that were to be displaced. A large section was accordingly re-zoned residential.

The decision to plan for the future development of the University was made by the Senate in 1957 on the assumption that the University would obtain increased Government assistance in the period 1960 – 70.[275] The plan that was drawn up in 1961 included new development on the 35-acre site bounded by City Road, Cleveland Street, Shepherd Street, Lander Street and Raglan Street.

In 1962 the University acquired the large Victorian Italianate building on the southern side of City Road known as the Institute. The building was constructed as the NSW Institution for the Deaf, Dumb and Blind to designs by Benjamin Backhouse from 1870 to 1884. It occupied a large triangular site that is bordered by City Road, Darlington Road and Codrington Street.

The 35-acre site together with the Institute site began to be referred to as the University Extension Area. The area was to have been covered entirely with medium rise buildings under a scheme drawn up in 1964. Fortunately the implementation of that scheme has not yet consumed the Institute site, although the Merewether building at the eastern end and the undistinguished University Regiment building at the other end have diminished the aesthetic values of the site and they have reduced it considerably in size.

11.11 Sport and the Grounds Form

Sport has been a dominant factor in University student life and in the use of the University grounds. Sport was accommodated at the University from the outset. Within ten years of the first enrolments there was a cricket ground that doubled as a rugby field and tennis venue and there were organised university clubs catering to both cricket and football (ie rugby). Shortly afterwards there was a union, a boat club, and a tennis and athletic club.

274 W.F.Connell, G.E. Sherington, B.H. Fletcher, C. Turney and U. Bygott, Australia's First: A History of the University of Sydney, Volume 2, 1940-1990, (Hale and Ironmonger, Sydney 1995), p.77.

275 Office of Assistant Principal, W.H. Maze, 'Development of the University Site', August 1961, p.2.

Today sport continues to play an important role in campus life and the sporting facilities are highly significant elements in the physical landscape. There are no fewer than four ovals (counting St Paul's and St John's Colleges), twenty-one tennis courts in four locations, three indoor gymnasiums, three indoor multi-purpose courts, squash courts and an indoor swimming pool. There are grandstands and small tennis pavilions catering to the needs of players and spectators.

Sport and Education

The first sporting club established at the University was the Football Club, which was formed in 1863. The Football Club introduced rugby to the University.

The Cricket Club was formed in 1865. This Club immediately lobbied for a playing facility on campus and, in 1866, the Senate decided that a portion of the University ground that had been originally allocated as a site for the Presbyterian College, but which had not been taken up in accordance with the conditions of the allocation, would revert to the Senate and that it would be temporarily reserved as a cricket ground for use by the undergraduates and other members of the University.[276] The deal was done and the first turf was cut, also in 1866.

In 1874 the Sydney University Union was formed under the presidency of Dr Badham.

The Boat Club that was established in 1884 operated initially from a boat shed at Woolloomooloo. But it soon relocated to a more convenient location on Blackwattle Bay in Glebe, where it continues to operate to this day.

The Tennis and Athletic Club was founded in 1885.

The Ovals

No. 1 Oval was the first sporting field at the University, established in 1866. It occupies a low-lying area between the former Orphan School Creek and the watercourse that formed the northern boundary of St Paul's College. A contour plan drawn in 1917[277] clearly illustrates that the area of No.1 Oval, marked 'Sports: Grounds' was the lowest part of the whole university site.

The area was originally intended as part of the grounds of St Andrew's College but it was given over to cricket, rugby and tennis when there were delays in the college building program.

In the early years the ground was poorly formed, although that would appear to have been consistent with most grounds of the era. In the period 1884-1890 the ground was properly formed for cricket under a program of ground improvements undertaken under a relief works scheme for the unemployed. A team of 60 men worked under the direction of Yeoman Bedell to level the ground, cut back and bank the perimeter and drain and turf the surface. The surrounding area remained largely unimproved until 1916 when spoil was brought from the open cuttings of the Sydney City Railway construction to fill and level the area around the veterinary school. Part of this area became the No. 2 Oval, when it was laid out in 1930.

Leslie Wilkinson viewed No.1 oval as an important feature of his plan for the University when he drew up a master plan in 1920. He proposed to realign the Oval on an east-west axis through an enlarged medical faculty at the eastern or top end and to terminate the view from there through the open Hockey Square, also on the axis, at the Oval. A second, north-south axis through the Oval would pick up a road from Carillon Avenue (Western Avenue) and an entrance from Ross Street. The Oval itself was to be dressed up with perimeter plantings and paths to make it a very formal feature.

[276] H.E. Barff, A Short Historical Account of the University of Sydney in Connection with the Jubilee Celebrations, 1852-1902. Sydney, Angus and Robertson, 1902, p.133.

[277] University of Sydney Site Plan, prepared by the Government Architect, dated 12 October 1917.

Hockey Square

The Hockey Square is one of two areas reserved within the University for women's sports following the formation of the Women's Sports Association in 1910. The Senate granted permission in 1916 for construction but as a result of wartime interruptions the Hockey Square was not completed until 1921.

The area appears on McRae's site plan for the University as an open area over which several later structures and paths have been superimposed, probably by Edwin Smith who built some of those structures. On McRae's 1917 site plan the area remained unformed, with contours running across the site.

In Walter Burley Griffin's plan for the University the area of the Hockey Square shows as a large formal open space on an east west axis of a symmetry, labelled 'campus'. Leslie Wilkinson adopted this idea and made the Hockey Square a formal feature at the centre of the planned university, with border avenues of trees and a formal vista through the square from the Holme building to the new Physics building and across to St Paul's College in the distance.

In 1924 the Hockey Square was enlarged on the northern edge to accommodate a full football field and additional netball courts were added. When Wilkinson's new Physics building was constructed high banks were constructed on the northern, southern and eastern sides of the Hockey Square, and two terraces were created above the eastern bank for new tennis courts. A single storey club house and dressing shed was constructed on the axis at the western end in 1923. This was removed in 1965 to make way for the new two storey Sports Centre.

In 1939 Wilkinson prepared a plan for the development of the eastern area of the campus in which he proposed a group of buildings in symmetrical order on the eastern side of the eastern row, and a new southern wing of the Anderson Stuart building, which would cause it to be balanced symmetrically on the east-west axis through the hockey square. At eastern end of the Hockey Square, on the eastern side of the tennis courts, he proposed to build a swimming pool.

Tennis Courts

The first tennis playing facilities at the University were established in the main quadrangle, where four good grass courts were laid for male and female students in 1885. The courts were enclosed with low wire mesh fences and they occupied roughly the same space as the present-day quadrangle. A small timber building was built adjacent as a Women's Common Room. The Ladies' tennis Club, which later became the Women's Sporting Club, was formed in 1887.

New tennis courts were constructed to the east of the Great Hall between main Avenue and Parramatta Road, presumably when the northwestern buildings of the main quadrangle were constructed in the early 1920s. The new tennis courts appear in a photograph taken from the Clock Tower, looking east, in the mid 1920s.

Additional tennis courts were placed between the Manning and Teachers buildings, adjacent to the Hockey Square in 1930. Tennis courts also occupied the area where the new Blackburn medical building was constructed in 1933. These courts appear on McRae's 1917 site plan adjacent to a proposed new building on the axis with the Prince Alfred Hospital.

The Blackburn building was designed by the Government Architect Edwin Smith and constructed with funding from the Rockefeller Foundation. At the insistence of the Vice Chancellor the Foundation was required to pay for the relocation of the tennis courts. Accordingly new tennis courts were established at the eastern, upper end of the Hockey Square in 1931.

The newest group of tennis courts were erected in the mid 1990s in conjunction with the Noel Martin sporting complex at Darlington.

College Grounds

The University colleges were allocated large tracts of land when the University was laid out in the 1850s. As a result the colleges have been able to dedicate large areas for sport. Today there are 'ovals' at St Paul's, St Andrew's and St John's colleges, and other facilities including tennis courts at Women's College.

The college sporting fields provide important green areas bordering the University campus. The St Paul's Oval also serves an important formal role as a home ground for university hockey, football and cricket teams.

Sporting Structures and Indoor Facilities
In 1957 the University Senate appointed a committee to prepare a masterplan for the future development of the campus. The plan was presented in 1961. Recreation concerns were to be given attention in the plan.

The landscaping of the campus was seen as important in 1957 and so too was the location of sporting facilities. The masterplan was to provide for future swimming pool, squash courts and tennis courts. The retention of the existing sporting facilities was implicit.

An indoor swimming centre and tennis courts were built in the University Expansion Area when the area was developed. These were recently incorporated into the new Noel Martin Centre, together with indoor ball courts.

The H.K Ward men's Gymnasium was built adjacent to No.1 oval and a new Grandstand was erected on the southwestern side of the Oval. A Women's Sports Centre was built adjacent to the Women's hockey field. Squash courts were built beside the tennis courts near Manning House. All of these facilities were constructed by the Men's and Women's Sports Unions.

The modern facilities on the main campus are undistinguished in their style. They do not make a positive aesthetic contribution but they unquestionably contribute a great deal to student sporting life and the continuing tradition of university sport.

11.12 Reflecting on the present day built form

The significant transformation in the built form of the university campus that has occurred since the War can be related directly to two principal developments. They were the increase in the size of the University student population and the expansion into Darlington, and the introduction of modern architectural styles.

Over the past five decades the University population has doubled and the size of the campus has almost trebled. In 1950 there was a student population of a little over 9,000 and the campus occupied an area of 140,000 square metres. In 1990 the student population had doubled to be over 18,000 and campus had grown in size to 340,000 square metres.

The changes in the built form commenced with the post War changes building industry, which moved from being a crafts and trades-based industry to a technology-based industry. New building materials, such as fibrous asbestos cement and metal cladding materials were introduced and modern design styles emerged. As a result the buildings built since the War are entirely different from those built before it. Their size is much greater and their forms are vastly different. Only a small number of the new buildings, such as the Blackburn, Madsen and McMaster Laboratory buildings, which are clad in brick and stone, relate to the earlier buildings.

The University campus now comprises three roughly equal portions, being the original campus, the colleges and the Darlington campus. The original campus and the colleges maintain a strong semblance of their traditional heritage form due mainly to the dominance of the early buildings and Wilkinson's planned form, which includes the roads, paths, sports fields and the associated landscaping. The greatest intrusions into this form have occurred in the southeastern corner of the original campus and in Darlington where most of the large new buildings have been erected.

12. OVERVIEW OF THE DEVELOPMENT OF AUSTRALIAN UNIVERSITIES

Universities were first established in the Australian Colonies during the nineteenth century.[278] It has been argued they were 'important symbols of colonists' cultural heritage', and part of a 'liberal education' that,

[278] This overview is heavily based on the entry for Universities in Davison and others 1998, supplemented by information from the *Australian Encyclopaedia*.

> '...would nurture the moral and social improvement necessary to mediate the transition to social and political maturity.'[279]

The founding dates for the initial Australian Universities are as follows.

Sydney	1850
Melbourne	1853
Adelaide	1874
Tasmania	1890
Queensland	1909
Western Australia	1910 (1911?)

One character of the founding of the Universities was a coalition of private and public interests. Given the differing cultural backgrounds of the colonists, it is perhaps understandable they drew on the examples set by English, Scottish and Irish Universities. The Australian Universities tended to be urban, mostly non-residential, and focused on imparting knowledge and professional training rather than, for example, induction into a privileged culture.

The Australian Universities were explicitly secular, although often associated with denominational residential colleges, and predominantly government funded. While Universities received government funding, they were self governing bodies. However, private donations were an important source of funds, especially for major initiatives, and this continued to be the case well into the twentieth century.

Student numbers were very low until the growth in secondary education in the 1880s provided a greater number of potential university students. While the Universities began with teaching general studies, arts and sciences, they quickly developed applied or professional courses such as engineering and medicine. However, some courses were expensive to teach, for example medicine, and these were restricted to the few larger/better funded Universities.

Australian Universities tended to offer only undergraduate degrees until 1939, with students having to travel overseas for a higher degree. The degree of Doctor of Philosophy was first introduced in Australia by the University of Melbourne in 1945.

Teaching was mostly undertaken by Professors who were assisted by small numbers of other staff. Research was relatively rare.

Two early and continuing features of Australian Universities are the presence of student unions, providing a range of services to the student body, and sporting organisations.

The Universities were influenced by the forces at work in the broader Australian society. So, for example, Melbourne benefited from the Victorian goldrushes during the latter half of the nineteenth century, and all Universities suffered funding cuts during the Depression of the 1930s.

With World War 2 education and research became matters of national significance, and the Commonwealth Government began to take more interest in the contribution of Universities. This interest was most direct in the case of the Australian National University which was established by the Commonwealth, and in 1951 the Commonwealth offered scholarships for University education. By the end of the decade the Commonwealth was responsible for tertiary education policy and a national tertiary sector was established.

The post war phase of establishing universities saw the creation of the following institutions.

Australian National University	1946
New South Wales	1958 (1949?)
New England	1954
Monash	1958
Macquarie	1963 (1964?)
La Trobe	1964

[279] Davison and others 1998:657.

Newcastle	1965
Flinders	1966

Student numbers grew dramatically, and a two tiered system was introduced in 1965 to protect the elite status of universities by creating tertiary level vocational training institutions, called colleges of advanced education. By 1973 the State Governments had given complete effective control to the Commonwealth which abolished fees and provided a system of living allowances to promote equitable access for students. None the less, in most cases an obligation remains to the State and Territory Governments which have legally established the Universities.

Student Enrolments	
c1950	25,000
1987	c400,000
c1996	c600,000

The number of vocational institutions continued to grow and in 1988 the title of university was given to a large number of the vocational institutions. However, a number of institutions were merged and fees were reintroduced. Since then there have been continued pressures on funding universities and changes to the system of fees. By 1996 there were 36 public and 2 private universities in Australia.

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Appendix 3

Conservation Management Plans for the University of Sydney

The University of Sydney holds the following conservation management plans in relation to individual buildings and site features:

Anderson Stuart's Medical School: 'A Plan for its Conservation' (commissioned by Australian Construction Services for The University of Sydney); J.S. Kerr, 1992.

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Appendix 4

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Appendix 5

List of Tasks for Upgrading the University of Sydney Conservation Plan 2002

The following is an outline of tasks undertaken in order to revise and update the October 2002 Conservation Plan:

Generally

- Transpose and reformat October 2002 Conservation Plan into standard CLS&P template.

Section 1 Introduction

- Revise and update text.
- Include statement acknowledging substantial incorporation of October 2002 Conservation Plan.

Section 2: Summary of History

- Accept previous history.
- Include chronology of development up to date (post 2002)
- Check and add re: historical planning concepts if needed (master plans).

Section 3: Physical Description

- Check building list and update.
- Update site features list.
- Update development sequence information regarding recent developments (post 2002).
- Accept general landscape and building descriptions- minimal upgrades.
- Add some salient descriptions of site features.
- Check and add to visual and planning axes (Table 3.1)
- Check and add to views and vistas (Table 3.2)
- Accept and redraw Archaeological zoning diagram – update from recent reports.
- Add Significant Character Areas and Significant Landscapes list with descriptions.
- Add Historic Roads list with descriptions.
- Add Continuing Uses (Precincts and Buildings) list
- Accept evidence of social significance.

Section 4: Analysis

- Accept analysis, review in light of new info, CLS&P opinions, client opinions

Section 5: Statement of Significance

- Accept Statement of Significance- review in light of new information, CLS&P opinions and client opinions.
- Add table of buildings with short statements of significance.
- Add ranking diagram for precincts and buildings.
- Add table of ranking of site features.
- Add table of ranking of views and vistas.
- Add table of ranking of axes.
- Incorporate ranking of significance for City Road Precinct and Engineering Precinct (to be prepared by others).

Section 6: Constraints and Opportunities

- Generally upgrade
- Include review of current listings
- Include revised managements' requirements, aspirations and opportunities

Section 7: Conservation Policy

- Rewrite to CLS&P template including archaeological zoning plan based on Section 3
- Include development zoning plan
- Policy to be stand-alone format repeating some diagrams from Section 5.

Section 8: Recommendations

- Delete this section

Section 9: Bibliography

- Accept this section

Appendix A: University of Sydney Overview History

- Accept and repeat this section

Appendix B: Legislation….

- Delete this section

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