REDEVELOPMENT OF THE FORMER RACHEL FORSTER HOSPITAL SITE

PRELIMINARY ENVIRONMENTAL ASSESSMENT

APPENDICES

Lippmann

APPENDIX 1 PRELIMINARY HERITAGE ASSESSMENT - WEIR & PHILLIPS

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HERITAGE ASSESSMENT

The Former Rachel Forster Hospital Site

Pitt Street, Redfern

The Rachel Forster Hospital, 1964.

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1.0 INTRODUCTION

1.1 How This Report Came About

This heritage assessment has been prepared at the request of Lippmann Associates, Architects, as part of a program to develop a Design Concept for the former Rachel Forster Hospital Site, Pitt Street, Redfern.

1.2 Authorship

This assessment was prepared by James Phillips, B.Sc. (Arch) B. Arch, M.Hert.Cons. (Hons), and Alice Fuller, B. Appl. Sc. (CCM), M.Hert.Cons. (Hons), of Weir + Phillips Architects and Heritage Consultants.

1.3 Limitations

An inspection of the site was limited to Buildings 1 and 2. No inspection was made of Building 3.

No historical archaeology was undertaken on the site.

1.4 Methodology

1.4.1 Physical Evidence

A site visit was conducted in 25 January, 2007. The photographs contained in this report were taken on that occasion.

1.4.2 Documentary Evidence

Resources

The following resources were accessed for the preparation of this assessment.

- Land and Property Information New South Wales.
- New South Wales Department of Commerce: Plans Department.
- Plans found at the Rachel Forster Hospital.
- State Library of New South Wales (Mitchell Library).

A full list of references can be found in Appendix 1

Planning Documents

The following planning documents are referred to.

- *State Environmental Planning Policy (Major Projects) 2005*.

1.5 Site Location and Layout

1.5.1 Location

The former Rachel Forster Hospital Site is located on the south western corner of Pitt Street and Albert Street, Redfern (Figure 1). The site is identified as Lot 7 DP 664804.

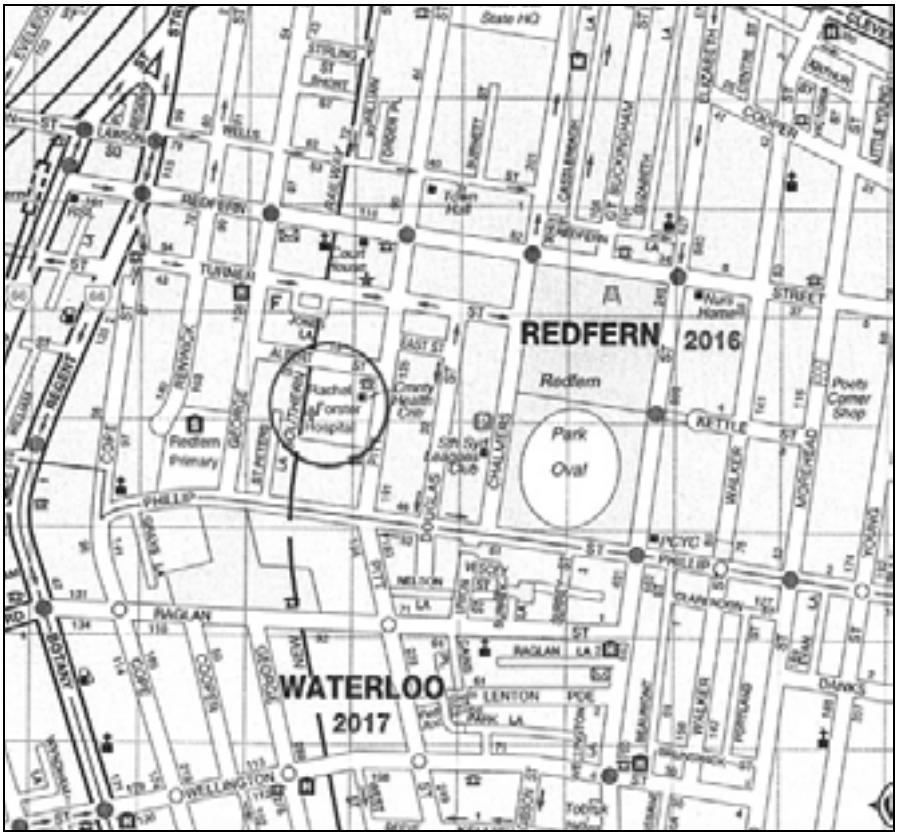

Figure 1: Location
Sydney and Blue Mountains UBD Street Directory, 2003.

1.5.2 Site Layout

The layout of the site is provided by Figure 2.

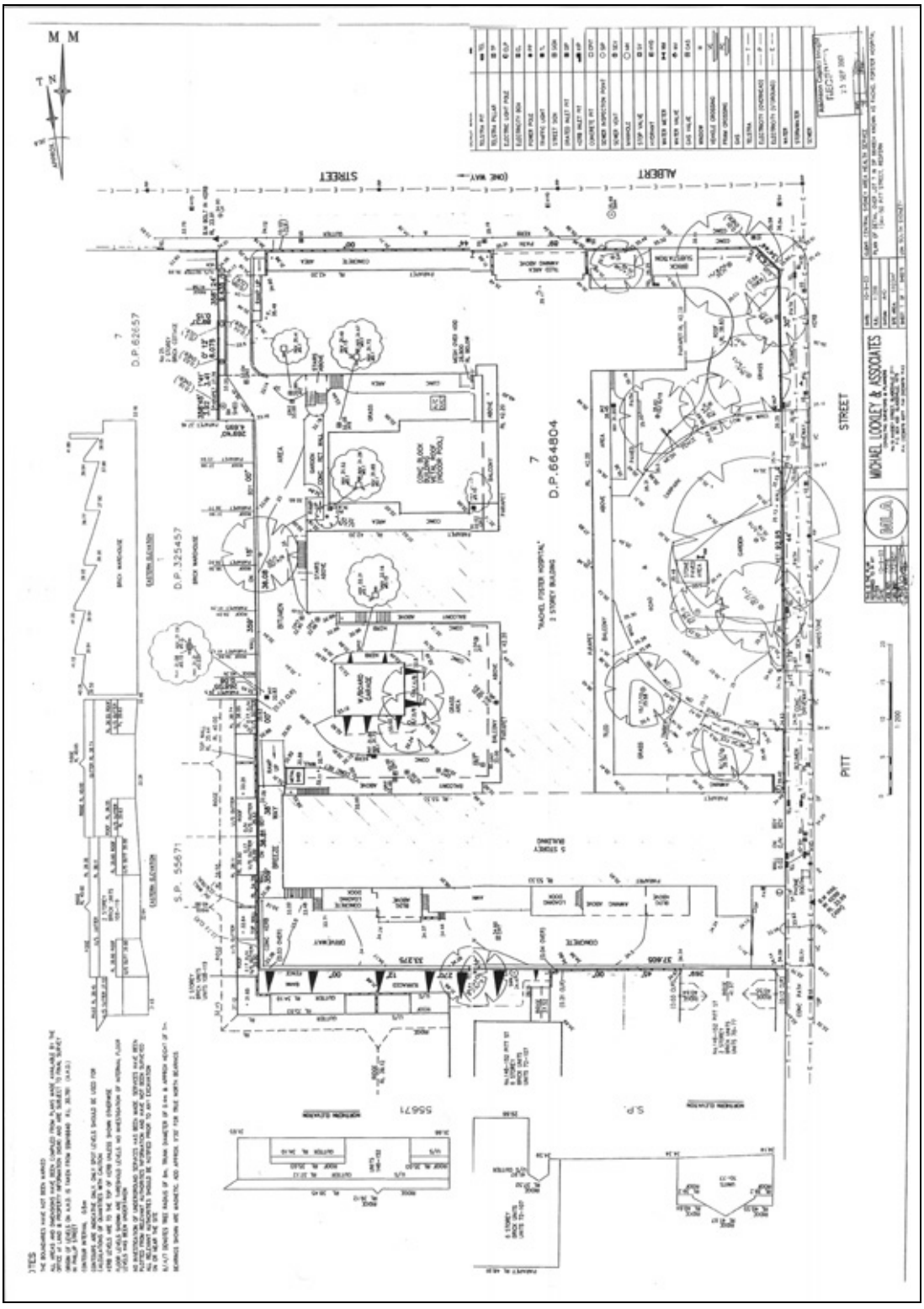

Figure 2: Site Layout

Michael Lockley and Associates, *Plan of Detail Over Lot 7 in DP 664804 known as Rachel Forster Hospital, 134-150 Pitt Street, Redfern,* 10.09.2003.

2.0 HISTORICAL DEVELOPMENT OF THE SITE

2.1 Cadi Country

At the time of the arrival of the First Fleet in 1788, modern day Waterloo, Redfern and Alexandria were thought to have been part of the lands of the Cadigal, a coastal Dharug speaking people. The Cadigal were decimated by their contact with the first European settlers. The current Aboriginal community living in Redfern and surrounding areas come from a wide range of lands and communities.

2.2 European History to 1939

The former Rachel Forster Hospital stands on part of a 100 acre grant made to Dr. William Redfern on 8 October, 1816 under the hand of Governor Lachlan Macquarie.

William Redfern (1774?-1833) arrived in New South Wales in 1801 as a convict. Redfern had been commissioned as a surgeon's mate in the Royal Navy and had soon after being caught up in a mutiny of Royal Navy sailors in May 1797. The death sentence handed down at his court marshal was commuted, on account of his youth, to transportation. Once in the colony, Redfern became an assistant surgeon and gained a free pardon in 1803. A popular doctor, his patients ranged from convicts to the leaders of colonial society, including the Macquarie and Macarthur families. While forceful and independent in character, he had a reputation for compassion and was regarded as the best obstetrician in the colony. Redfern took an active part in colonial life and was an advocate for the rights of emancipists. He acquired considerable property; at the time of his death in 1833, he owned around 23,190 acres of land in New South Wales.

Following Redfern's death, his 100 acre grant of 1816, commonly known as *Redfern's Farm*, was inherited by his widow and his son William. The grant was subdivided into allotments and offered for sale as the Redfern Estate on 16 March, 1842. Section 7 of the estate, including the subject property, was further subdivided by George Cooper Turner. Nineteenth century survey plans of Redfern and *John Sands Suburban Directories* indicate that numerous buildings were built on this subdivided land, the most significant being *Redfern Lodge.* When this single storey stone residence was constructed is not known; it may predate the 1842 subdivision. Later newspaper articles describe it as the 'home of Dr. Redfern' and it may be the building shown in a 1842 subdivision plan of adjoining land. In the late 1860s, *Redfern Lodge* was acquired by the Thompson family, later well-known as Hunter Valley horse breeders. *Redfern Lodge* was still owned by the Thompsons when the site was resumed for hospital purposes in 1937. *Redfern Lodge* was demolished to construct the new hospital.

2.3 The Rachel Forster Hospital

The resumption of the site for the Hospital, an area of one acre, two roods and thirty three perches, was proclaimed in the *Government Gazette* of 25 June, 1937.

The Rachel Forster Hospital was originally established for the treatment of women and children and owes its inception to six female doctors, in

particular Dr. Lucy Gullet (1876-1949) and Dr. Harriet Biffin (1874?-1939). By the early 1920s, there were two main hospitals for the treatment of women and children in Sydney: the Women's Hospital in Crown Street and the NSW Benevolent Society's Royal Hospital for Women in Paddington. In establishing a third women's hospital in Sydney, the six doctors had two main aims. Firstly, to provide treatment for

> '…necessitous women which embodied not only medical knowledge, but also a sympathetic understanding arising from their more intimate knowledge of a women's problems'; secondly, to provide a centre for work among women doctors, a training school for new graduates and for women specialists in every field.'

During the late nineteenth and early twentieth centuries women were permitted to graduate in medicine from Sydney University but were denied appointments as residential medical officers in New South Wales public hospitals. Most New South Wales graduates travelled overseas or interstate to gain a hospital residency. Dr. Gullett and her colleagues were inspired by the example of the Queen Victoria Memorial Hospital in Melbourne, founded in 1892. This hospital, managed and run by women for women, was one of three worldwide at the time it was opened.

The women raised funds to purchase a dilapidated terrace in Lansdowne Street, Surry Hills and opened in January 1922 as the New Hospital for Women and Children. The New Hospital, providing an out patient service only, initially offered two daily medical clinics, an eye clinic and a clinic for the treatment of venereal disease. In providing services to women, the New Hospital was part of a developing movement, arising out of female emancipation, that sought improved medical treatment. Contemporary movements include Tresillian, for post natal care (1918), Karitane, for nursing mothers (1923), and Marie Stope's Society for Constructive Birth-Control (1921), which opened its first Birth Control Clinic in London in 1922.

During its first year, the New Hospital treated 2,421 patients, 773 of whom were children. The community support that the New Hospital received from the outset is exemplified by the 23 doctors (some male) who attended in an honorary capacity during its first year and the fact that the first annual meeting was chaired by the wife of the Governor General, Lady Rachel Forster.

In 1923 new premises were sought for the rapidly expanding Hospital and a large house was purchased in George Street, Redfern. The name of the New Hospital was changed to the Rachel Forster Hospital for Women and Children. The opening of the Hospital in August 1925 was the last public duty performed by Lady Forster before her return to England, where she continued to maintain an interest in the Hospital. The move to new premises provided for an extension of the activities of the Hospital. A small number of in-patients could now be accommodated and the first Resident Medical Officer was engaged, along with full time nursing staff. A new wing was added in 1926, including a new Out-Patients Department, which was by then catering for 19,000 visits a year.

An increasing number of special clinics were opened at the Rachel Forster Hospital through the late 1920s and 1930s, including clinics for the

treatment of skin diseases, eye, dental, physiotherapy and ear, nose and throat and ante-natal clinic, an Almoner's Department and a Rheumatism and Child Guidance Clinic. The latter was part of the Psychiatry Department and was revolutionary at the time it was opened. The Hospital was recognised as a Public Hospital under the New South Wales Hospitals Act (1929) in 1931.

During the 1920s and 1930s, numerous Hospital Centres were established throughout New South Wales in order to raise funds for the Rachel Forster Hospital and spread word of its mission. The work of volunteers in fund raising and administration was to remain a fundamental aspect of the Hospital's operation. The work of patrons (and staff) of the Hospital is remembered in the numerous memorials to be found within the Hospital and around the site.

By the mid 1930s, the George Street site was no longer meeting the needs of the Hospital. The Hospital Board sought the help of the Hospitals Commission in the purchase of a new site and the construction of a new hospital. By 1933, Leighton Irwin had been appointed as architects; by 1939, the Hospital Board were able to report that specifications and working drawings for the new hospital had been completed. The foundation stone was laid on 24 August, 1940. The Hospital Board had given considerable thought as to whether they should continue with its building programme in a time of war, reaching the conclusion that:

> 'It was realised that war would certainly cause increased poverty and suffering, and probably bring with it epidemic disease, so that hospital accommodation would be more urgently needed than ever. It was felt that time must elapse before Australian wealth and manpower could be totally absorbed in the war effort….many resources now being used to produce non-essentials should be diverted to war purposes before essential services such as hospitals should be sacrificed….Your Board has offered to place the building at the disposal of the military authorities as soon as completed, should it be required, for the duration of the war.'

Leighton Irwin designed hospitals and hospital extensions in Melbourne, Sydney, Hobart and Launceston, as well as in country New South Wales and Victoria. The most significant examples of their work are considered to be the Prince Henry's Hospital and Nurses Home, St. Kilda (Figure 2) and the Heidelberg Military (Repatriation) Hospital. The practice is considered second only to Stephenson and Turner for hospital design in Australia during the mid twentieth century.

The new Hospital was designed on 'modern perpendicular lines'

> '…with ward floors in one block rising high into the clean air and facing north so as to obtain a maximum of sunlight. Along the north side of every floor there will be balconies designed to catch the sun all day in winter and to shade the wards in summer. All the wards will be subdivided to provide privacy and quietness so that sick women and children from poor homes may be nursed back into health in their new 'sunshine hospital' under the best possible conditions.'

Figure 2: Lyle Fowler, *Prince Henry's Hospital, Melbourne,* c.1952. State Library of Victoria.
Designed by Leighton Irwin, 1940-1955. Demolished in 1994.

Modernism in architecture found its ideal expression in health-related architecture. Hospitals could be readily associated with the rapid advances in medicine made since the turn of the century. The first 'modern' hospital in Australia was Stephenson and Meldrum's Mercy Hospital in Melbourne in 1934. This, and other hospitals that followed, reflected the latest advances in European and American hospital practice and the influence of European architects such as Alvar Aalto and Willem Dudok.

The Rachel Forster Hospital was designed with future growth in mind:

> '…future maximum of 200 patients, a nurses' home, an outpatients' department and X-Ray and Pathological Departments; for the present accommodation will be provided for 110 inpatients, X-Ray and Pathological Departments and 55 nurses, and the existing building will be used for outpatients.'

It was also noted that provision had been made for the later addition of two additional floors on the southern wing.[1] The contractors for construction were Messrs. H.W. Thompson.

The new Rachel Forster Hospital was officially opened in December 1941 by Lady Wakehurst, wife of the Governor of New South Wales. The total construction cost was around £144,000. Staff occupied the new Hospital on 15 December 1941; patients, however, would not be moved into the Hospital until 25 February, 1942. In a reflection of the growing intensity of war in the Pacific, air raid shelters and emergency operating and treatment rooms were constructed in the basement of the Hospital before the completion of the building.

[1] Walter Bunning, 'The Rachel Forster Memorial Hospital', *Art in Australia*, June-August, 1942, p.82.

The newly completed Hospital was featured in a number of the major building and design reviews of the day including *Building* (24 December, 1941), *Construction Review* (January 1942), *Decoration and Glass* (February 1942) and *Art in Australia* (June-August 1942). It also appeared in general interest magazines, such as the *Australian Women's Digest* (May 1946).

Two views of the Hospital showing the 'iconic views' frequently published of the Hospital are provided by Figures 3 and 4. Note the incomplete colonnade shown by Figure 3.

Figure 3: The Rachel Forster Hospital, 1942.
Decoration and Glass, February 1942.

Figure 4: *Rachel Forster Hospital*, c.1960.
Photograph from undated pamphlet entitled Rachel Forster Hospital Sydney, Mitchell Library, ML MSS. 2458.

Particular mention was made by contemporary journals of the interior layout and decoration of the Hospital, an area of hospital architecture for which Leighton Irwin was particularly noted. During the 1950s, the well-known

children's illustrator Rhona 'Pixie' O'Harris augmented the original scheme in the Children's Ward with painted mural(s). Leighton Irwin continued to design alterations and additions for the Hospital over the ensuing years.

Expansion of the Hospital continued during World War II and in the immediate post war period. In 1941, the Hospital was recognised as a Training Centre for nurses. In 1945, a new Nurses' Home and a Cafeteria were opened. Among the most important Post World War II developments was the opening of the Breast Clinic, under Dr. Kathleen Cunningham in the latter part of 1950. Modelled on similar clinics in Guys Hospital, London and the Memorial Hospital, New York, this clinic was among the first of its kind in New South Wales. Dr. Cunningham went on to pioneer new surgical procedures for the treatment of breast cancer. A new Outpatients' Department, named in honour of Sir William McKell, was officially opened in 1953. The second floor of the new wing (designated Building 3) was occupied by various specialist clinics. In 1955, Dr. Marjorie Dalgarno commenced the relatively new study of Mammography; Rachel Forster became the first hospital in Sydney to undertake this type of investigation.

Two significant changes occurred at the Rachel Ward Hospital in the 1960s. Now that female doctors were accepted in New South Wales public hospitals, thereby fulfilling one of the needs for which the Rachel Forster Hospital had been founded, the Hospital Board decided to employ male resident doctors. The decision was also taken to open the first Male Ward in response to a need for general hospitals services due to the construction of residential flats in the immediate area. The male ward was opened in August 1967 to great publicity.

The Rachel Forster Hospital was threatened with closure in the late 1980s as part of ongoing changes in the methods of health delivery. The Hospital was reprieved and continued to offer a wide range of services until it closed in 2000. The remaining staff and facilities were transferred to Prince Alfred Hospital, Camperdown.

3.0 SITE ASSESSMENT

3.1 Exterior

The former Rachel Foster Hospital consists of a group of connected buildings forming an 'H.' The buildings are built of face brickwork set in a reinforced concrete frame. Windows are timber frame and the roofs are flat with a membrane cover.

The group consists of the following buildings:

- The southern building (Building 1) is of five storeys with long north facing reinforced concrete balconies to the third, fourth and fifth floors. The southern elevation is broken by a series of lift and stairwells. The elevation to the east presents a formal modernist composition of rectangular and circular fenestration set in brick panels of restrained decoration (Figure 5).

Figure 5: The northern elevation of Building 1 showing its formal composition. The relationship to the horizontal balconies is obscured by tree growth.

- The colonnaded building (Building 2) is of two stories with a continuous colonnade to the east elevation. Behind the colonnade there is simple vertically proportioned rectangular fenestration relieved by a simple hooded entry with double doors and an oriel window above (Figures 6 and 7).

Figures 6 and 7: The Colonnade and entrance into Building 2. Its connection to Building 1 is now obscured by trees, thus obscuring 'The Iconic View' illustrated by Figures 3 and 4.

Figure 8: Looking along the balcony of Level 3 on Building 2. Note direct access to wards.

- The northern building (Building 3) consists of a single storey semi-circular portion to the east and a three storey building running to the west. This building was built later than Buildings 1 & 2 (1953 as the Outpatients Department). Its elevation to Albert Street consists of a regular series of bays separated by concrete fin walls (Figure 9).

Figure 9: The entrance to the Outpatients Department, Building 3, completed a few years after Buildings 1 & 2.

- There is a more recent building set in the northwest courtyard and connected to Building 2 containing a hydrotherapy pool. This building, also designed by Leighton Irwin was constructed in 1977/78 and is of limited architectural merit.

Important to the site is a large and mature camphor laurel tree *Cinnamomum camphora* located in the front court yard and possibly dating from the time of Dr Redfern (Figure 10).

Figure 10: View through the southern entry gate showing the mature camphor laurel to the right.

3.2 Interior

The interior of the building is representative of hospitals of its period. It consists of a series of rooms efficiently set off both sides of a series of central corridors. Skirtings are coved and vinyl covered. Walls are smooth plastered with corniced ceilings. There is an extensive range of built-in furniture and specialist hospital apparatus. Interiors are generally painted off white (Figure 11).

Figure 11: Typical corridor, Building 1.

Aside from larger rooms, the operating theatres and staff dining rooms, there are no major spaces. The main entrance is modest and characterised by a large timber wall plaque, naming benefactors to the Hospital (Figure 12). Many rooms and items have small plaques fixed to them indicating a donor for that item or facility.

Figure 12: Timber plaque in the entrance hall. The social significance of the site is demonstrated by the extensive use of plaques to record contributors to the Hospital.

Much of the interior has undergone change over time through various forms of refurbishment. Original floor coverings, joinery and fittings have been replaced and many additional services introduced to wards and theatres.

4.0 SIGNIFICANCE

4.1 Statement of Significance

The former Rachel Forster Hospital Site, Redfern, has state historic and social significance as a place where a wide range of medical and social services were provided to women and children from 1937 until 2003 and to men from 1967 to 2003. The association of the site with medical services extends back to the early colonial period. The site was part of a grant made to Dr. William Redfern in 1816. A popular and compassionate doctor and skilled obstetrician, Redfern is among the most important medical men in early Australian history. *Redfern Lodge* once stood on this site.

The former Rachel Forster Hospital Site, Redfern, has state historic significance for its association with women pioneers of twentieth century medicine in New South Wales, six of whom opened the Hospital's predecessor- the New Hospital for Women and Children- in Surry Hills in 1922. Of these women, Dr. Lucy Gullet (1876-1949) and Dr. Harriet Biffin (1874?-1939) are particularly notable. When opened in 1922, the Hospital was part of a wider movement to improve women and children's health arising out of female emancipation. The philosophies established by these women at the New Hospital in 1922 continued to inform the operation of the Hospital until its closure in 2003.

The former Rachel Forster Hospital Site, Redfern has state historic significance for its provision of medical training for women. The Hospital was established at a time when female graduates were denied appointments as resident medical officers in New South Wales Hospitals. The Hospital has technical significance for the pioneering or introductory work carried out by staff. The opening of the Breast Clinic in 1950 and the use of mammograms from 1955, for example, were among the first instances of this type of treatment in New South Wales.

The former Rachel Forster Hospital Site, Redfern has state social significance for the former staff, patients and volunteers. From the mid 1920s onwards, the Hospital was strongly supported by a network of Hospital Centres established throughout New South Wales. Private donations- monetary or in kind- were the Hospital's primary source of income during the first twenty years of its existence. Volunteers and supporters were involved in all aspects of the Hospital's life and came from all walks life, from the wife of the Governor General, Lady Rachel Forster, for whom the Hospital was named, to school children who donated eggs. The construction of the existing hospital buildings in 1940-1, at the beginning of World War II, highlights its importance; the continued expansion of the Hospital over time testifies to its significance within the wider community. The services of staff, supporters and volunteers are commemorated around the site in the form of plaques and memorials.

The former Rachel Forster Hospital, Redfern has social significance at a local level for the important health services that it provided, at nominal rates, to the local community. The Hospital responded to changing local needs, opening an Almoner's Department during the Great Depression and a male ward in 1967 to provide for the mixed populations being housed in the new nearby Housing Commission flats.

The Rachel Forster Hospital Site has aesthetic significance as a fine example of modernist hospital design and the work of Irwin Leighton (1892-1962). Irwin Leighton are considered second only to Stephenson and Turner in hospital design in Australia during the 1930s to 1960s. The Rachel Forster Hospital demonstrates the influence that European architects such as Willem Dudok and Alvar Aalto had on hospital design during this period.

The Rachel Forster Hospital has aesthetic significance for its contribution to the streetscape as a well-designed modernist complex. The site has landmark qualities because of its community associations and the size of the buildings relative to the surrounding terraced housing. The most significant view corridors towards the site identified by historic photographs are as approached along Pitt Street from the north. This view corridor takes in the northern and eastern elevations of the southern building (Building 1) and the colonnade along the eastern elevation of the middle building (Building 2).

4.2 Existing Citations and Listings

4.2.1 Statutory Listings

The former Rachel Forster Hospital is identified as a heritage item under Clause 27 Heritage Conservation, Division 4, Part 5 in Schedule 3 of *State Environmental Planning Policy (Major Projects) 2005*.

This clause requires consent to alter or demolish a heritage item. In this clause, ***heritage item*** means a building, work, relic, tree or place that is indicated as a heritage item on the Redfern–Waterloo Authority Sites Heritage Map. Clause 27 applies to development under Part 4 of the Environmental Planning and Assessment Act and not to development under Part 3A of the Act.

4.2.2 Non Statutory Listings

The site was originally listed as a Heritage Item on the *South Sydney Local Environmental Plan 1998*. The *South Sydney LEP 1998* no longer applies to this site.

5.0 HERITAGE OPPORTUNITIES AND CONSTRAINTS

5.1 With Regard to the Preferred Option

The adaptive reuse of hospital buildings poses a number of challenges in achieving a balance between good residential design and the need to recognise heritage significance. In the case of the former Rachel Forster Hospital there are opportunities and constraints:

5.1.1 Opportunities

- The buildings consist of narrow blocks meaning that there is access to light from two sides and the opportunity for cross ventilation.
- Hospitals of this period were developed using a language of strong horizontal lines forming deep north facing balconies.

- The combined ‘H’ shape of the buildings on the site gives good access to various parts of the buildings.
- The original design for Building 1 allowed for the construction of two additional storeys at a later date.
- The relationship between Building 1 and Building 2 forms the ‘iconic view’ of the Hospital complex. This view is taken looking south along the colonnade towards Building 1 and takes in the horizontal massing of Building 1 and its intersection with the flat roof of the colonnade on Building 2. This renders almost all the other elevations of lower significance.

5.1.2 Constraints

- The floor plates in combination with the column spacing are not quite deep enough for efficient use as residential buildings.
- Layout of buildings used as a hospital have differing solar access requirements than those of residential buildings.
- Within the building, spaces required to function as a hospital are not readily compatible with those required for residential re-use.

6.0 ASSESSMENT OF THE PREFERRED DESIGN CONCEPT

6.1 Preferred Design Concept

The preferred design option prepared by Lippmann Associates proposes to adaptively reuse the former Hospital as a residential development. The basic ‘H’ configuration of the buildings is retained with new Building 4 ‘hidden’ from view. This retains an understanding of the configuration of the building when viewed looking south along Pitt Street (‘The Iconic View’).

6.1.1 Building 1

The additions to Building 1 consist of the construction of additional space along its southern elevation and the addition of one storey to the roof. There is already a substantial roof top structure containing plant running along the southern edge.

The design of additions to the building should also be of a form such that it is readily differentiated from the original, but should maintain the strong horizontal line of the existing building.

Additions to the southern elevation to deepen the floor plate would have a manageable impact, as this is a minor elevation. Sufficient setback from the eastern elevation would be required to maintain its current form.

6.1.2 Building 2

Building 2 is two storeys with an external double height colonnade to the street elevation. Its flat roof aligns directly with the lowest balcony level of Building 1. This is the defining element that links Building 1 and Building 2. Beneath the roof, the colonnade is formed by a row of slender octagonal columns, making reference to classical Greek architecture and anticipating the work of Walter Bunning; Anzac House (1958) and the National Library (1964) and a range of other post-war stripped classical buildings. The

horizontal plane of the roof and the spacing of the columns must be retained in an identifiable form.

The proposal is to demolish Building 2, save the colonnade, and to construct a deeper building with an additional storey. The top floor would be set back from the eastern elevation to preserve the line of the colonnade and its roof.

The placement of the top floor of Building 2 will require careful consideration in light of the importance of its roofline and colonnade. The design of the new building should also be of a form such that it can be readily differentiated from the original, but should maintain a neutral backdrop to the colonnade.

6.1.3 Building 3

This building is the least significant of the group as its contribution to the 'iconic view' is limited.

It is proposed to demolish this building and replace it with a new building of three storeys plus basement level.

The colonnade elevation of Building 2 would link back into this building.

Repeating setbacks and building form in a manner similar to Building 1 would enhance the visual cohesion of the whole.

6.1.4 Building 4

This new building is located adjacent to the western boundary of the site behind Building 2 and Building 3. With a height of three storeys this building will be difficult to see from either Albert or Pitt Streets, ensuring the continuation of 'The Iconic View'.

7.0 CONCLUSION

The former Rachel Forster Hospital Site, Redfern, has state historic and social significance as a place where a wide range of medical and social services were provided to women and children from 1937 until 2003 and to men from 1967 to 2003. The association of the site with medical services extends back to the early colonial period. The site has state historic significance for its association with women pioneers of twentieth century medicine in New South Wales, six of whom opened the Hospital's predecessor- the New Hospital for Women and Children- in Surry Hills in 1922. When opened in 1922, the Hospital was part of a wider movement to improve women and children's health arising out of female emancipation. The former Rachel Forster Hospital Site has aesthetic significance as a fine example of modernist hospital design and the work of Irwin Leighton (1892-1962) and has aesthetic significance for its contribution to the streetscape as a well-designed modernist complex.

Much of the significance of the site is vested in its founders, the development of medical services in New South Wales and the association derived from its use by the general public over many years. This significance is best maintained and recognised through a comprehensive interpretation strategy. This strategy would form part of a Conservation Management Plan.

The aesthetic significance of the building is vested in its 'modern design' for a hospital of its time. As the building was built on a limited budget, much of it is humble and utilitarian in design with rear and side elevations reflecting the function of the interiors in unrelieved face brick walls. Even the architectural elements comprising the 'iconic view' is very restrained. The parts of the building demonstrating 'modern design' and hence aesthetic significance are confined principally to the east elevation of Building 2 and the north and east elevations of Building 1.

The preferred Option takes into consideration these significant elevations and maintains their essential characteristics by the following means:

- The understanding of the relationship between the colonnade and the horizontality of Building 1 is maintained.
- The formal composition of the east elevation of Building 1 is maintained.
- An additional storey is built on to Building 1, part of a plan for the ultimate expansion of the Hospital.
- New additions are set back or attached to elevations with low significance.
- Buildings of low significance are replaced with new purpose built buildings.
- Provision is made for the retention of the camphor laurel as part of a landscaped forecourt.
- Maintaining the building footprint 'H' configuration.

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The impact of the Preferred Design Concept on the heritage significance of the site is manageable as associative and cultural significance is maintained through interpretation and the aesthetic significance is maintained through the retention of the most significant architectural elements.

8.0 APPENDIX 1

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APPENDIX 2 PRELIMINARY PLANNING REPORT - SJB PLANNING

Lippmann

SJB Planning

Preliminary Planning Report

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Former Rachel Foster Hospital

134 - 150 Pitt Street, Redfern

27 March 2007

1.0 INTRODUCTION

This report has been prepared on behalf of Redfern-Waterloo Authority, for the redevelopment of the former Rachel Forster Hospital located at 134 – 150 Pitt Street, Redfern.

The site is listed in Schedule 3 of the Major Projects SEPP, and the proposed development has a Capital Investment Value of $42 million. The proposal seeks to redevelop the former Rachel Forster Hospital Site to accommodate residential development.

The purpose of this report is to:

- Describe the proposed redevelopment of the former Rachel Forster Hospital site;
- Provide an overview of the proposed redevelopment of the former Hospital site to assist in the formulation of environmental assessment requirements by the Director-General under s75F (2) of the EP&A Act.
- Seek the Minister for Planning's opinion that the proposed redevelopment of former Rachel Forster Hospital site is development of a kind described in Schedule 3(state significant sites) of State Environmental Planning Policy (Major Projects) and is a project to which Part 3A of the EP&A Act applies;
- Seek the Minister's authorisation to submit a Concept Plan application for the project; and
- Identify potential issues and scope of environmental assessment for the preparation of a Concept Plan for the project;

1.0 THE SITE

The former Rachel Forster Hospital site is located at 134-150 Pitt Street, Redfern, and is legally described as Lot 7 DP 664804. It is bounded by Albert Street to the north, residential development to the south, Pitt Street to the east and a warehouse and residential development to the west. (Figure 1)

The site has an area of approximately 6923sqm and is occupied by various disused hospital buildings. A two-three storey building fronts Albert Street, which is linked to a central two storey wing fronting Pitt Street. The central wing links to a five storey building extending along the southern boundary. The topography of the site falls from Pitt Street to the west exposing an additional sub-basement level of the buildings.

The five storey building along the southern boundary is identified as an example of Inter-War functionalist style hospital building.

The use of the site as a hospital ceased in 2000 when staff and facilities were transferred to the nearby Prince Alfred Hospital in Camperdown. A community health facility currently operates from the building fronting Albert Street.

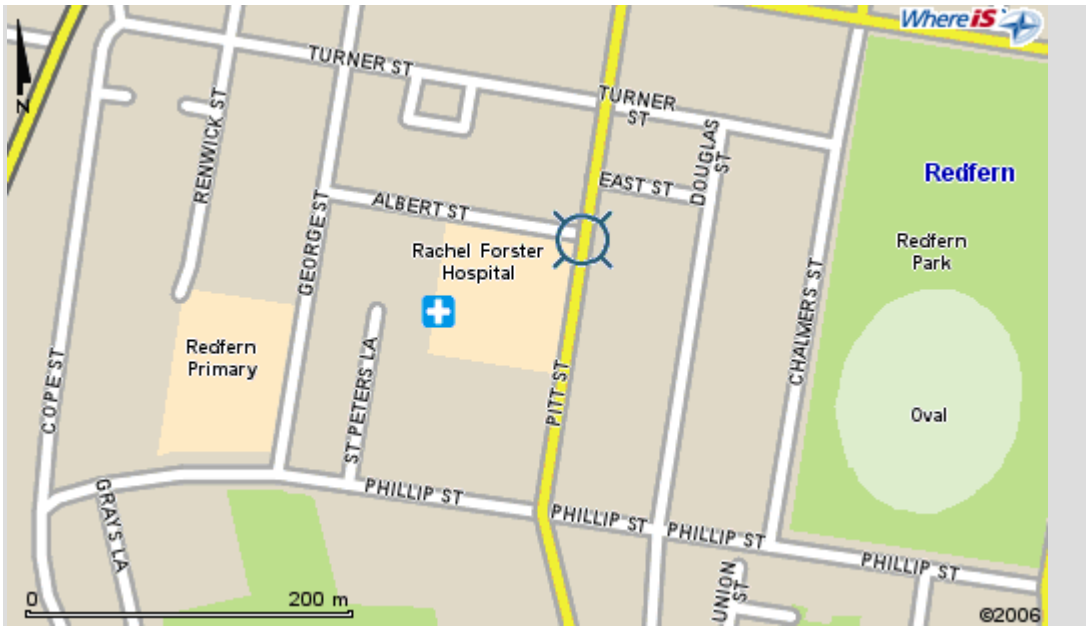

Figure 1: Location of the subject site

1.1 Site History

The Rachel Forster Hospital, designed by Leighton Erwin architects, was officially opened in December 1941 by Lady Wakehurst, wife of the Governor of New South Wales. Staff occupied the new hospital on 15 December 1941; patients, however, would not be moved into the hospital until 25 February, 1942. In a reflection of the growing intensity of war in the Pacific, air raid shelters and emergency operating and treatment rooms were constructed in the basement of the Hospital before the completion of the building.

Two iconic views of the Hospital are provided in Figures 2 and 3.

Figure 2: The Rachel Forster Hospital, 1942. *Decoration and Glass, February 1942.*

Figure 3: Rachel Forster Hospital, c.1960. Photograph from undated pamphlet entitled Rachel Forster Hospital Sydney, part of *Rachel Forster Hospital, Sydney, NSW: Records, 1904-1974*. Mitchell Library, ML MSS. 2458.

Expansion of the Hospital continued during World War II and in the immediate post war period. In 1941, the hospital was recognised as a Training Centre for nurses. In 1945, a new Nurses' Home and a Cafeteria were opened. Among the most important Post World War II developments was the opening of the Breast Clinic, under Dr. Kathleen Cunningham in the latter part of 1950. A new Outpatients' wing was opened in 1953. The second floor of the new wing was occupied by various specialist clinics. In 1955 Rachel Forster became the first hospital in Sydney to undertake the relatively new study of Mammography.

In the 1960s the Hospital Board decided to employ male resident doctors and in August 1967 a male ward was opened in response to a need for general hospital services due to the construction of residential flats in the immediate area.

The Rachel Forster Hospital continued to offer a wide range of services until it closed in 2000. The remaining staff and facilities were transferred to Prince Alfred Hospital, Camperdown.

A preliminary heritage assessment prepared by Weir+Phillips indicates that the façade of the southern building and the connection to colonnade of the central building has aesthetic significance as this forms the "iconic view" of former Rachel Forster Hospital. This renders all other elevations of the existing buildings as being of low significance.

1.2 Description of the locality

The site is predominantly surrounded by residential development, with the exception of an industrial warehouse adjoining the site on its western boundary.

Development along Pitt Street and Albert Street is characterised by two – three storey terrace houses. The southern boundary of the site is adjoined by a modern multi-unit residential development up to six storeys in height. Higher rise built form is evident to the south with the Department of Housing towers. The highest of these towers is more than 30 storeys.

2.0 PROJECT OUTLINE

2.1 Project Objectives

The project objectives to redevelop the site include;

- Protect the heritage significance of the site;
- Provide a high quality residential development on the site;
- Retain and provide publicly accessible open space opportunities;
- Minimise impacts upon adjoining properties; and
- Complement the surrounding existing streetscape and urban form.

2.2 Project description

The concept proposes to redevelop the site to accommodate residential development. The preferred concept designed by Lippmann Associates seeks to retain the general appearance and footprint of the existing buildings on the site, and to provide public open space. The Project is expected to accommodate more than 120 dwellings, with a floor space of 14,000sqm and a floor space ratio of 2:1

The Project will include the following works:

- Retain Building 1 with the addition of one storey to its existing height-generally equivalent to the height of the existing rooftop plan enclosure rooms.

  The building will result in an overall height of 6 storeys above ground level plus a basement level;

- Demolish Building 2 and investigate the opportunity to retain the existing colonnade fronting Pitt Street.

  The reconstructed building will result in an overall height of 3 storeys.

- Demolish Building 3 and construct a new residential flat building on a similar footprint that maximizes residential amenity. The building will achieve a height of three storeys plus basement level along Albert Street.

  The building will achieve an overall height of 3 storeys above ground level.

- Construct a new 3 storey building, Building 4, adjacent to the western boundary of the site.

- Retain and provide open space fronting Pitt Street, located in front of Building 2. The landscape space will aim to provide an environment that will encourage safe green space for the local community.

Detailed descriptions of the proposed works to each building are provided below:

Building 1

The additions to Building 1 consist of the construction of additional space along the southern elevation, increasing the footprint, and the addition of one storey. The existing building contains a substantial roof top plant enclosure running along the southern edge of the building accommodating plant and utility services. The proposal seeks to construct an additional level above the existing height of the building, marginally higher than this roof top plant room enclosure.

The additional built form is proposed to include setbacks from the building façade and building edges to read as a different element, thereby ensuring a contrast to the existing building.

Construction to the southern elevation is required to deepen the floor plate to ensure internal space efficiency and minimum internal resident amenity is achieved.

Building 2

Existing Building 2 is two storeys with an external double height colonnade to the street elevation. Its flat roof aligns directly with the lowest balcony level of Building 1. The horizontal plane of the roof and the spacing of the columns will be investigated to determine the opportunity for retention.

The remainder of the building will be demolished and replaced with a building with a deeper footprint to the west. The height of the building will be one storey above the existing height of the building. The concept however seeks to include gaps between the new building with Buildings 1 and 3 in order to provide visual links through the site, and to ensure sufficient separation is provided between residential dwellings for amenity reasons.

Building 3

The existing building is of least heritage significance among the group given that its contribution to the "iconic views" is limited. It is proposed to demolish this building and replace it with a purpose-built structure on a similar footprint but which maximises residential amenity. The proposal will include an extended footprint to the south and an increase in height. The building will present as a 3 storey plus basement building along Albert Street.

Building 4

It is proposed to construct an additional 3 storey building adjacent to the western boundary of the site. The building will be located west of Building 2 and between Buildings 1 and 3, barely visible from either Pitt Street or Albert Street.

2.3 Concept Plan

To obtain the statutory approval for the redevelopment of the site it is requested that the Minister provide authorisation that the development proposal be subject to a Concept Plan approval process under Part 3A of the Environmental Planning and Assessment Act. As set out in the draft guidelines relating to Concept Plan Applications (24 July 2005), a Concept Plan approval process:

"provides for a proponent to obtain an approval upfront for the concept of a major, complex project prior to undertaking more detailed studies in relation to implementing the various components of the project".

The guidelines set out three types of situations where there could be benefits in undertaking Concept Plan Approval. It is considered that the redevelopment of the former Rachel Forster Hospital is consistent with situation "A", as follows:

"Major project delivery on a site where alternative layouts or configurations need to be considered upfront including the setting of the development footprint along with justification of the project"

Given the size and complexity of the site, its constraints and competing priorities, the potential redevelopment requires application of the Concept Plan approval process, providing the design, policy and planning framework and setting the future direction for the redevelopment of the site.

The Concept Plan process will enable the strategic issues and the general development parameters of the project to be determined at the beginning of the development assessment process, while retaining the necessary level of flexibility for the more detailed design phase of the project.

The Concept Plan will include the following:

- The preferred design concept and layout for the redevelopment of the site;
- Proposed building envelopes and massing;
- Proposed gross floor area and floor space ratio;
- Analysis of overshadowing and how ecological sustainable development will be achieved;
- Conservation Management Plan, and resolution of items of heritage significance;
- Proposed vehicular and pedestrian entry and exit points, location and number of car parking spaces;
- Public, communal and private open space, including relationship between proposed open space and building footprints and the interface between the public and private domain;
- Analysis of supporting infrastructure servicing the Project, including services, utilities and stormwater services; and
- Estimated development yields/number of dwellings.

2.4 Capital Investment Value

The Capital Investment Value of the project in accordance with the Major Projects SEPP is estimated to be approximately $42 million

3.0 STATUTORY AND POLICY CONTROLS

The Environmental Planning instruments that apply to the site include:

- State Environmental Planning Policy (Major Projects) 2005
- State Environmental Planning Policy No. 55 – Remediation of Land
- State Environmental Planning Policy 65 (Design Quality of Residential Flat Buildings)
- State Environmental Planning Policy (Building Sustainability Index) BASIX

In addition, the Redfern Waterloo Built Environmental Plan – Stage One 2006 applies to the site.

Part 5, Division 1, Clause 3 of State Environmental Planning Policy (Major Projects) 2005 states all other environmental planning instruments do not apply to the Redfern–Waterloo Authority Sites, except for other state environmental planning policies.

A discussion of the relevant instruments and policy controls is provided below:

3.1 State Environmental Planning Policy (Major Projects) 2005

Clause 6 of the Major Projects SEPP provides that development that, in the opinion of the Minister, is development of a kind referred to in Schedule 3 (State Significant Sites) is declared to be a project to which Part 3A of the Act applies. Part 5, Division 2, Clause 5 of Schedule 3 of the SEPP identifies that development with a capital value of more than $5million within the Redfern–Waterloo Authority Sites is a State Significant Site. The redevelopment of the Rachel Forster Hospital site is identified within Map 3 to this Schedule and will have a capital value in excess of $5million. Consequently it is considered that the proposed development is a Major Project subject to the provisions of Part 3A of the Act, and it is requested that the Minister confirm this opinion.

Part 5, Division 3 of Schedule 3 deals with the provisions relating to development of Redfern–Waterloo Authority Sites.

The site is identified as being zoned *Residential —Medium Density Residential* as shown on the map marked "Redfern–Waterloo Authority Sites Zoning Map". The Objectives of this zone are as follows:

(1) The objectives of the Residential Zone—Medium Density Residential are as follows:
(a) to provide for a range and variety of housing types in the Zone,
(b) to allow for other types of development to provide facilities or services to meet the day to day needs of residents in the local area,
(c) to enable other development that is compatible with housing,
(d) to ensure the vitality and safety of the community and public domain,
(e) to ensure that buildings achieve design excellence,
(f) to promote landscaped areas with strong visual and aesthetic values to enhance the amenity of the area.

(2) Development for any of the following purposes may be carried out on land within the Residential Zone—Medium Density Residential only with development consent: boarding houses; child care centres; community facilities; dual occupancies; dwelling houses; group homes; health consulting rooms; home industries; multi dwelling housing; neighbourhood shops; places of public worship; residential flat buildings; seniors housing; shop top housing; telecommunications facilities; temporary structures.

(3) Except as otherwise provided by this Policy, development is prohibited on land within the Residential Zone—Medium Density Residential unless it may be carried out under subclause (2).

The Project seeks to redevelop the site for residential development and is consistent with the objectives of the zone.

Part 5, Division 3, Clause 21 limits the height and floor space ratio of the site in accordance with the *Redfern–Waterloo Authority Sites Height Map* and *Redfern–Waterloo Authority Sites Floor Space Ratio Map*. The Maps indicate a maximum floor space ratio of 2:1, with a predominant six storey height limit covering the site, and a three storey height limit along Albert Street. It is noted that sub-clause (3) allows the Minister to vary the Height and Floor Space Ratio control in an approval for a concept plan for the development.

The project achieves a floor space of 14,000 sqm resulting in a floor space ratio of 2:1 which complies with this control. Along the Pitt Street elevation, Building 1 reads as 6 storeys, Building 2 reads as 3 storeys, and Building 3 reads as 3 storeys. The topography of the site falls from Pitt Street to the west exposing an additional sub-basement level of these buildings. Overall, the Project will achieve the following building height above ground level: 6 storeys to Building 1, 3 storeys to Building 2, 3 storeys to Building 3 and 3 storeys to Building 4.

Part 5, Division 3, Clause 22 requires the consent authority to consider whether the proposed development exhibits design excellence. Given the proposal is for a Concept Approval, the Environmental Assessment will include design excellence principles to be incorporated for future detailed design of the building form. As the proposed buildings do not exceed 12 storeys a design excellence competition is not required to be undertaken.

3.2 State Environmental Planning Policy No. 55 – Remediation of Land

SEPP 55 seeks to promote the remediation of contaminated land in order to reduce risks to human health and the environment. Where land is contaminated, SEPP 55 requires that it be suitably remediated prior to any development occurring on that land. The SEPP contains provisions relating to the level of remediation required, and the consent mechanisms in relation to the remediation works.

The SEPP also contains references to contaminated land planning guidelines, which set out the steps to be taken in order to assess whether and to what extent the subject land is contaminated. The site has previously been investigated to determine the extent of land contamination and is considered to be suitable for residential development. An additional assessment will be required when access improves, possibly through building demolition to fully characterise the subsurface condition of the site and to meet EPA specified sampling density.

3.3 State Environmental Planning Policy No. 65

An assessment under SEPP 65 will need to demonstrate that the Project will satisfactorily meet the design quality principles and provide an example of good quality design in respect to internal amenity, urban design and sustainability.

3.4 State Environmental Planning Policy (Building Sustainability Index) BASIX

As the proposal is for a concept approval for the site, the Environmental Assessment will not be accompanied by a BASIX Certificate. Rather the Environmental Assessment will set Ecological Sustainable Development principles to demonstrate that the development will meet the water and energy efficiency reduction targets for new multi-unit residential developments.

3.5 Redfern Waterloo Built Environmental Plan 2006

The Plan identifies the proposed land use zone as Residential Zone – Medium Density Residential and identifies the proposed land use concept as *'predominantly residential development consistent with the surrounding land uses. Provide the opportunity for community uses in keeping with the residential use.'* (Figure 4)

Figure 4: Former Rachel Forster Hospital Land Use

The proposed heights and floor space ratio for the site are illustrated in Figure 4.11 and 4.12 of the Plan. The Plan indicates a maximum floor space ratio of 2:1, with a predominate 6 storey height limit covering the site, and a three storey height limit along Albert Street. (Figure 5)

Figure 3.5 of the Plan indicates publicly accessible open space area between the two vehicular entrance points fronting Pitt Street, which would possibly include parks, plazas or urban spaces.

Figure 3.6 of the Plan identifies the five storey surgery building and part of two storey colonnade building as being a Heritage Item. The proposal seeks to retain the external appearance of these building structures, with the exception of a gap between the surgery building and the colonnade for residential amenity reasons.

Figure 5: Former Rachel Forster Hospital Height & Floor Space Ratio

4.0 AGENCY CONSULTATIONS

4.1 City of Sydney Council

City of Sydney Council is the local government authority to the Redfern Waterloo Authority area. The proposed development may be referred to Council for comment, as part of the Environmental Assessment process and for the formulation of the Director General's requirements.

4.2 Roads and Traffic Authority

To date, no consultations have been made with the RTA. The proposed development may be referred to the RTA as part of the Environmental Assessment process and for the formulation of the Director General Requirements.

4.3 Energy Australia

Consultation with Energy Australia will be undertaken to determine the suitability of existing infrastructure, and the size and location of any electricity transformer units if necessary on site.

4.4 Sydney Water

Discussions with Sydney Water will be undertaken to determine the suitability of the existing utility infrastructure to accommodate the proposed development.

4.5 Gas

A services survey will be prepared to identify the location of natural gas mains. The connection of the site with natural gas will be investigated as part of the preparation of the Environmental Assessment.

4.6 Telecommunications

A services survey will be prepared to identify the location of telecommunication infrastructure. Preliminary discussion will be held with Telstra to determine the suitability of the existing telecommunication infrastructure to accommodate the proposed development.

5.0 LIKELY ENVIRONMENTAL ISSUES

The likely environmental issues identified below will be outlined in further detail in the Environmental Assessment report.

5.1 Traffic and Parking

The Environmental Assessment will be accompanied by a parking, transport and traffic report. There are limited parking facilities on site at present. The Project will investigate the inclusion of basement parking to the site, suitable vehicular entry points, and general vehicular circulation on the site.

5.2 Heritage

The Environmental Assessment report will include an assessment of the heritage significance of the site, and structures, and impact of the proposal on the heritage significance. This will be undertaken by a qualified heritage consultant.

5.3 Structure

A preliminary structural analysis prepared by a qualified engineer will be included with the Environmental Assessment verifying that the existing building structure can accommodate the preferred concept.

5.4 Landscape

The Environmental Assessment will include an indicative principles diagram which will address the publicly accessible open space and the residential communal open space. The landscaping design philosophy will:

- Provide for the retention of publicly accessible open space fronting Pitt Street, located in front of Building 2;
- Seek to integrate the private domain with the public domain to achieve a successful interface;
- Encourage surveillance and security; and
- Identify vegetation worthy of retention and nominate potential species.

5.5 Residential Amenity

The Environmental Assessment will include an analysis of the potential impact of the Project upon the residential amenity of adjoining residential dwellings. The analysis will include an assessment of shadow, privacy and visual bulk and scale impacts from habitable windows, and private open spaces serving the living areas of adjoining residential dwellings.

The analysis will include shadow diagrams in plan and elevation, and boundary cross-sections, including sight lines.

5.6 Construction Management

The Concept Plan will include Statement of Commitments that will address construction management of the Project, and the incorporation of environmental mitigation measures prior and during construction.

5.7 Ecological Sustainable Development

The Environmental Assessment will investigate ecological sustainable development principles that can be incorporated as a whole within the Project.

6.0 SUMMARY

The site is listed in Schedule 3 of the Major Projects SEPP. The proposal seeks to redevelop the former Rachel Forster Hospital Site to accommodate residential development. The proposed development will provide significant benefits to the locality, through the provision of open space, the retention of the heritage significance of the building structures on the site, and provide high quality residential accommodation to revitalise the Redfern area.

The site is located in close proximity to the Sydney CBD, and public transport. The redevelopment of the site to residential development is consistent with the Redfern-Waterloo Built Environment Plan (Stage One) 2006.

In accordance with the requirements of the Major Projects SEPP, the following is sought:

(a) The Minister's opinion that the redevelopment of the former Hospital site is a development of a kind described in Schedule 3 (state significant sites) of the State Environmental Planning Policy (Major Projects) 2005.

And If the Minister agrees to consider the proposal a major project, then the following:

(b) The Minister's authorisation for the proponent to submit a Concept Plan application for the whole project; and
(c) The Director General issue the requirements for the preparation of a single comprehensive Environmental Assessment.

APPENDIX 3 PRELIMINARY ENVIRONMENTAL & GEOTECHNICAL ASSESSMENT
DOUGLAS PARTNERS

Lippmann

Douglas Partners
Geotechnics · Environment · Groundwater

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PF:jlb
Project 44661
22 February 2007

Redfern Waterloo Authority
PO Box 3332
REDFERN NSW 2016

By mail and email Joanne.McGuinness@rwa.nsw.gov.au

Attention: Ms Joanne McGuinness

Dear Sirs

SITE INSPECTION AND REVIEW OF PREVIOUS REPORTS
RACHEL FORSTER HOSPITAL
134-150 PITT STREET
REDFERN

1. INTRODUCTION

This letter presents the results of a site inspection and a review of previous environmental and geotechnical reports prepared by Douglas Partners Pty Ltd (DP) in November 2003 (Projects 36299 and 36299A). The work has been commissioned by Redfern Waterloo Authority, to review the previous assessments, to comment on the validity of the findings and to assess whether the assessments have appropriately addressed the relevant NSW legislation or policy requirements.

The letter should be read in conjunction with the following documents:-

- *Report on Geotechnical Investigation*, DP Project 36299, dated November 2003;
- *Report on Preliminary Contamination Assessment*, DP Project 36299A, dated November 2003

It is understood that the previous assessments undertaken by DP were originally commissioned by Atkinson Capital Insight Pty Ltd on behalf of Central Sydney Area Health Service (part of the Department of Health).

2. SUMMARY OF RESULTS OF INVESTIGATIONS

Geotechnical Investigation 2003

The 2003 geotechnical investigation comprised the drilling of a total of ten test bores. Four of the test bores terminated at the top of rock, and the remaining six test bores were terminated at depths ranging from 4.6 m to 6.05 m into rock. Based on the findings of the investigation the site generally comprised concrete/bitumen covering underlain by filling to depths between 0.3 m to 1.9 m.

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Sand was present beneath the filling in most of the bores to depths of 1.4m to 5m followed by sandy clay and stiff to hard clay. Extremely low to medium strength siltstone was encountered in five deeper bores below depths ranging from about 3 m to 6.7 m.

No free groundwater was encountered during augering and drilling fluid precluded groundwater observations in the deeper bores.

As no conceptual design plans and no design loads were available, the comments contained in the report regarding excavation, site preparation, safe batter slopes, excavation support, retaining wall design, foundations and pavements were of generic nature only. Hence, it was recommended that further advice be sought to determine whether the comments are suitable for a specific site development, when detailed plans and design loads are available.

Environmental Assessment

The contamination assessment comprised sample collection from 10 test bores which were also drilled for geotechnical purposes. Selected samples were analysed for potential organic and inorganic contaminants, and contaminant levels were compared with the NSW EPA health-based investigation guidelines for commercial/industrial sites (HIL Column 4)[1] with respect to sealed areas, provisional phytotoxicity-based investigation levels for sandy loams of pH 6–8 (PPIL Column 5) with respect to unsealed areas and the NSW EPA Threshold Concentrations for Sensitive Sites[2] with respect to petroleum hydrocarbons. The results are summarised as follows:

- concentrations of heavy metals, TRH, BTEX, PCB, OCP, Phenols, PAH and benzo(a)pyrene were well within the adopted guideline criteria with the exception of:-
  - Samples B2/0.5 and B9/1.5 which registered PPIL exceedance of lead and zinc respectively;
- No asbestos was detected in the soil samples that were sent for asbestos analysis.
- General waste classification for the brown sand and clay filling with crushed bricks, gravels with a trace of glass, ash and slag are provisionally classified as *Inert Waste* with the exception of the material within the vicinity of Sample B2/0.5 which is provisionally classified as Industrial Waste. Please note that Inert Waste with respect to PAH that is classified under Approval Number 1999/05 have to be disposed off at a Solid Waste Landfill, and may incur a cost commensurate with Solid Waste .

Based on the analytical findings, DP considered that the site can be rendered suitable for the proposed construction of the mixed residential and commercial buildings subject to the removal of the soil material within the vicinity of Bores 2 and 9 if the area is not designated to be permanently paved and/or capped under building footprints.

Due to the presence of buildings and hence, access constraints, it was considered that additional assessment was required to fully characterise the subsurface condition of the subject site and to meet NSW EPA specified sampling density.

In addition, the waste classification should be verified with further investigation at the time of site development when the entire site is accessible and the subsoils are exposed for inspection/investigation.

[1] *NSW EPA (1998) Contaminated Sites: Guidelines for the NSW Site Auditor Scheme which has since been replaced with an updated version published in2006.*
[2] *NSW EPA (1994) Contaminated Sites: Guidelines for Assessing Service Station Sites.*

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3. SITE INSPECTION

A site inspection was conducted at the subject site on 13 February 2007. DP confirms that no discernible physical changes have occurred at the site since the previous assessment which was conducted in November 2003.

4. CONCLUSIONS

It is understood that the land use category (ie. residential units) of the current proposed redevelopment is generally consistent with that which was previously planned. It is noted that the NSW EPA Guidelines for Site Auditors Scheme (1998) was used to assess the findings of the Preliminary Contamination Assessment. This guideline has since been updated in 2006. However, no changes were made in relation to guideline values. Therefore, the conclusions and recommendations of the Preliminary Contamination Assessment are still valid.

Assuming that the type of development remains similar to that previously proposed, DP considers that the original recommendations made in the Preliminary Contamination Assessment and the Geotechnical Investigation reports are still valid.

Should you have further queries, please do not hesitate to contact either of the undersigned at 9809 0666.

Yours faithfully
DOUGLAS PARTNERS PTY LTD

Polo Foo
Environmental Engineer

Ronnie Tong
Principal

Fiona MacGregor
Principal

APPENDIX 4 PRELIMINARY SERVICES REPORT - ARMSTRONG CONSULTING ENGINEERS

Lippmann

REDFERN WATERLOO DEVELOPMENT AUTHORITY

FORMER RACHEL FORSTER HOSPITAL REDEVELOPMENT SITE

Preliminary Hydraulic and Fire Services Scheme Development

February, 2007

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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Job number 107/106

Job title	Redfern Waterloo Authority Former Rachel Forster Redevelopment Site		Job number 107/106 FH
Document title	Preliminary Hydraulic and Fire Services Scheme Development		File reference 107.106.daa.rep.01
Document ref			

Revision	Date				
Ø	16.2.07	Filename	Rachel Forster Hydraulic Services Scheme Development		
		Description	First draft		
			Prepared by	Checked by	Approved by
		Name	DAA	JGH	DAA
		Signature			
1	28.2.07	Filename	Rachel Forster Hydraulic Services Scheme Development		
		Description	Final report incorporating client changes		
			Prepared by	Checked by	Approved by
		Name	DAA	JGH	DAA
		Signature			
2	26.3.07	Filename	Rachel Hospital Hydraulic Services Scheme Development		
		Description	Final report issued to client incorporating final changes		
			Prepared by	Checked by	Approved by
		Name	DAA	JN	DAA
		Signature			
		Filename			
		Description			
			Prepared by	Checked by	Approved by
		Name			
		Signature			

CONTENTS

1.0 INTRODUCTION

This report outlines the preliminary design intent and progress report for the hydraulic and fire services as part of the future proposed "brownfield" site development of the former Rachel Forster Hospital site at 134-150 Pitt Street, Redfern. The proposed project is for existing buildings constructed for hospital use to be demolished, upgraded and reconstructed to include a new building constructed for residential use.

This report includes development proposals and investigation to date for the inclusion of the following hydraulic and fire services within the proposed development:

Potable Cold Water Service
Potable Hot Water Service
Non Potable Cold Water Service
Warm Water Service
Non Potable Hot Water Service
Recycled Water System
Irrigation System
Water Treatment System
Water Storage
Waste Water Treatment System
Sanitary Plumbing
Sanitary Drainage
Grease Waste System
Garbage Areas
Trade Waste System
Sewer Drainage
Sewer Encasement
Natural Gas System
Roof Water Drainage System
Siphonic Roof Water Drainage
Stormwater Drainage System
Sub-soil Drainage System
Stormwater Detention
Fire Hydrant System
Fire Hose Reel System
Fire Sprinkler System
Emergency Warning and Intercommunication System
Smoke Detection System
Fire Extinguishers
Solid waste handling System
Capping off Services During Demolition Work
Capping off Services During Demolition Work

2.0 THE PROPOSED DEVELOPMENT

The proposal is for the redevelopment of the former Rachel Forster Hospital site for residential purposes, which is redundant to requirements of the NSW Department of Health,. The proposed development involves the construction of a class 2 multi storey residential development with underground car park facilities. The proposal involves the construction of new buildings, adaptive reuse of some existing structures by constructing additional areas and elements and demolition of redundant existing buildings and structures and removal from site.

3.0 PROPOSED DESIGN

The proposed design on this brown field site, consists of a proposal to construct four main structures on the existing site after demolishing inferior or unwanted existing structures. The proposal must be considered with Architectural Drawings SK 1, SK2, and SK3 dated February 2007.

The existing Building 1, which is located adjacent to the southern boundary, is to be generally retained, and an additional storey is to be added to the height of a building structure. The completed area of Building 1 is proposed to be increased to approximately 6,640 sq. m.

A new Building 2 of approximately 1,710 sq. m is proposed to be constructed of three storeys height incorporating the existing heritage colonnade frontage to Pitt Street.

The existing Building 3 on the north boundary to Albert Street is proposed to be demolished and a new building that is three storeys above ground level is proposed.

A new Building 4 of approximately 1,400 sq. m is proposed to the rear of the Pitt Street frontage on the western boundary of the property.

A landscaped forecourt is proposed between Building 2 frontage and the Pitt Street Boundary.

4.0 Hydraulic Services

4.1 General

New services would be required for the proposed development to comply with all Authorities, Building Codes of Australia, Manufacturers recommendations, Authority codes and regulations. All existing services being made redundant are to be uncovered and capped off to comply with Authorities and gas and water meters are to be returned to the Authority having jurisdiction over the service supply.

4.2 Building and Australian Standards Code Requirements

The hydraulics, fire and waste system would be designed to comply with all relevant codes and standards, including:

- Provision of hydraulic services systems in accordance with: AG 601, AS 3500 2003, NSW Plumbing Code of Practice, Local Government Regulations, Manufacturers Guidelines and Requirements, MP2 Standards, Workcover requirements and NSW OH&S Act, Authorities having jurisdiction over the works and current best tradesman work practices.
- Building Code of Australia and referenced Standards and codes
- Fire engineered solutions that are proposed, would incorporate any fire engineered report outlining the demands imposed on the project construction in conjunction with the report.

- Fire suppression and emergency evacuation systems shall comply with Australian Standards, Codes, Regulations, Building Code of Australia, Fire Authority requirements.
- Solid Waste plans and handling is proposed to comply with Sydney City Council solid waste handling Regulations, Codes and Design
- NSW Government BASIX Requirements are proposed to be utilised within this project.
- Australian Standards, Codes, Regulations and Authority requirements pertaining to the works is proposed to be incorporated into all services in any proposed development.

4.3 Potable Domestic Cold Water System

An 80mm incoming domestic water supply, meter and backflow device exists on site at the southern end of the Pitt Street frontage. This service would require to be capped off at the street on the Sydney Water water main and the water meter removed and returned to Sydney Water during demolition works. Calculations would be made on any proposed project to engineer a reticulated supply in the appropriate sizes and to ascertain whether the existing supply size is adequate or there may be a requirement to upgrade the supply to deliver adequate potable water for human consumption to ensure a constant delivery for potable use at all faucets, cisterns, make-up supply, outlets and hot water heaters.

4.4 Non Potable Cold Water System

A non potable system of roof rainwater storage tanks and tertiary treated recycled rainwater reticulation could be considered for reuse within the proposed site for laundry hot water, cistern flushing and planter bed drip feed irrigation and general wash down. All proposed non potable outlets would be engineered and require indication of 'Warning Non Potable Water Do not Drink' to regulations and the distribution pipe work colour coded. The whole system would comply with AS3500, manufacturer requirements, Authorities and department of Health regulations.

4.5 Potable Hot water Service

A centralised natural gas flow and return hot water system could be considered with individual remote hot water flow meters for each unit. The hot water system would propose utilising preheat from solar collectors on the roof, mechanical services waste heat and gas flue waste heat to decrease energy consumption. The hot water heater system energy consumption would be metered to obtain efficiency and billing readings.

4.6 Non Potable Hot Water

Consideration could be given to the alternative use of treated rainwater storage for use in laundry areas for clothes washing facilities.

4.7 Warm Water Service

It is proposed that all hot water to be used for ablutions within any building would be thermostatically controlled to below 50deg. Centigrade to comply with AS3500. Hot water for laundry and kitchen sinks would not be required to be thermostatically controlled.

4.8 Recycled Water System

Consideration could be given to capturing and storing roof water and rainwater for reuse within the building. The stored water should be filtered, disinfected and have residual disinfection injected for use in WC flushing, clothes washing and wash down including drip feed and sprinkler irrigation. The recycled water storage system for flushing and laundry use, would also have Sydney Water town main fill back up reserved for low tank levels. There could be two tanks systems. One tank would be for flushing use and possible human contact containing only roof water run-off. The other possibility could be contained within extra storage of any underground stormwater detention system for irrigation but not for possible

human contact unless treated to ARMCA/NZ Guidelines . Any recycled water system would be marked as "Warning - Non Potable Water Do Not Drink" and all distribution pipe work coloured lilac according to AS3500.

4.9 Irrigation System

Drip feed irrigation could be utilised for garden beds and an after hours irrigation timer could be utilised for lawn areas. All irrigation would be controlled by a time clock and soil moisture detection unit as well as rain detection units. Irrigation for planter beds is a detailed issue that would require landscaping coordination at the detailed design and operational planning phase of any future development.

4.10 Water Treatment System

Should a recycled water system be considered, it could be provided with automatic filtration and disinfection by UV radiation, RO or an Ozone unit, followed by hypochlorite dosing to retain 2ppm Chlorine residual. Monitors would automatically alarm system dosing failure. Such a system would require a maintenance management program to be adhered to.

4.11 Rainwater Water Storage

Roof water storage could be by the use of polyethylene storage tanks above or below ground depending on the final proposed building design. Stormwater OSD and storage could be through the use of concrete underground tanks.

4.12 Waste Water Treatment System

There is a possibility of utilising a staged waste membrane bio reactor with post tertiary treatment for recycling treated grey water for WC flushing. This proposal has merit, would require separate black water and grey water drainage systems and programmed maintenance plan. This proposal has not been discussed as a priority of the scheme design

4.13 Sanitary Plumbing

The existing sanitary plumbing could not be successfully adapted to a new residential design layout for any new building proposal. A new system would be required to be engineered for any new proposed buildings to comply with AS3500.

4.14 Sewer Drainage

The existing sewer drainage system would be required to be replaced as it is unsuitable for draining the proposed new residential development. A new house drainage system would be installed to drain the sewer to the Sydney Water main in accordance with AS3500. A sewer diagram of the existing buildings as well as the position of the Sydney Water sewer mains is included as Annexure 'B' with this report.

4.15 Sewer Encasement

A 225mm Sydney Water sewer main sideline transgresses onto the site in the North east corner of the site at the Albert Street frontage. Sewer main connections are available at the west end of the Albert Street frontage, and central of the south boundary. Any sewer passing under or through the site affected by the confluence of the building foundations would be required to be concrete encased to conform to Sydney Water "Building Over Sewer" requirements or diverted around the building as permitted.

4.16 Natural Gas System

Natural gas is available to the site and it is proposed that this energy would be used to heat the building, hot water and cooking. A main gas meter would be installed for the development and remote individual gas meters for each unit, central hot water, space heating and central mechanical plant. A site plan showing the natural gas mains available to supply the site is included as Annexure 'C' for this project.

Any existing natural gas supply and gas meter would require excavating, capping off and returning the existing site gas meter to the Authority during demolition works.

4.17 Roof Water Drainage System

Roof water drainage would be by box gutters, eaves gutters, sumps, flashings, downpipes and overflows and would be developed as the proposed structure design is progressed.

4.18 Siphonic Drainage System

Any proposal for a roof siphonic drainage system would be included if the conditions and economy for use is available on the project. Siphonic drainage could be adapted where pipe concealment and flat grade is required within the proposed structure.

4.19 Stormwater Drainage System

Currently there is a 300mm main stormwater line traversing the site. A search at the NSW Department of Lands has revealed that there are no registered stormwater easements relating to this property, nor are there any on the adjoining properties. There would be a requirement to propose to the City of Sydney Council, an upgrade of the stormwater drainage from the site for any new development proposal. A site detention system would be required to retain all run off from the site as possible. There would be an opportunity to reuse rainwater storage and that portion not reused or detained would drain to and be connected to a City of Sydney stormwater street main. Site detention could be situated in the proposed landscape forecourt area and communal open space area. Any discharge to a stormwater main or kerb and gutter would first be required to pass through a silt arrestor. Footpath crossings would use transition sectional drainage and finished kerb entry all as approved by the City of Sydney Council.

The site could incorporate swale and garden infiltration or soakage areas on landscaped designs for runoff areas. A stormwater flood path would also required to be incorporated in the proposed project design

A Sydney Council stormwater main traverses east to west along George Street. The stormwater drainage from the Rachel Forster site could be proposed to be laid south down Pitt Street to connect to this main and drain any runoff from the proposed redevelopment from this site to the City of Sydney Council approval.

4.20 Sub-Soil Drainage System

A sub soil drainage system would be proposed to be installed behind retaining walls, below floor slabs for property drainage where in ground subterranean water pressures would be encountered. Any sub basement, basement car parks, basement areas and built up garden areas, retaining walls, planter beds and the like would require a sub soil drainage system

4.21 Storm Water Detention

A stormwater detention OSD system would be incorporated within any proposal to retain stormwater flows from a developed site to below the flow that would be experienced by the pre development conditions. The detention system could also in corporate a silt arrestor and incorporate extra storage volume for stormwater reuse.

4.22 Solid Waste Disposal System

Consideration would be made to the correct layout and design of any solid waste garbage chutes including fire protection, ventilation, back flow disconnection water supply and receiving receptacle areas. Such a system would incorporate maintenance access for blockages and aesthetic chute finishes inside the building.

4.23 Solid Waste Handling Plan

A solid waste handling plan would be considered in the proposal based on the Sydney City Council current ‘Code for waste handling in Buildings”.

4.24 Demolition Material Recycling Plan

A demolition material recycling plan would be considered for all material during deconstruction activities. There would be opportunity to classify materials into metal classes, glazing, concrete, brickwork, timber a other classifications and plan the recycling process for disposal from site for processing and reuse as useful end products. Roadways and transport routes from site to recycling and waste depots would require planning an permission from Authorities to conform with all requirements.

4.25 Sanitary Fixtures, Fittings and Tapware Outlets

Sanitary fixtures installed in the project would be ergonomic, economic, aesthetically pleasing for the use they are required for and be "AAA" rated for water use. Tap ware and water outlets would be ergonomically designed and 'AAA' rated for water flows. All water pipe work installed in the project would be engineered for adequate size and flows as well as insulated to retain the thermostatic properties of the water medium, allow expansion and deliver acoustic attenuation.

4.26 Tenancy Provisions

The following tenant supplementary services would be proposed to be provided to tailor for their specified needs:

- Individual remote water, gas and hot water usage metering to each individual apartment dwellings.
- Acoustic attenuation of all stormwater, sanitary plumbing, drainage and other pipe work passing within the structure to below tolerable BCA decibel rated standards.

5.0 Stormwater Onsite Detention (OSD)

5.1 General

Onsite detention will be installed on site to prevent any upgraded catchment areas from causing increasing load capacities to the existing City of Sydney Council stormwater system and aid in detention for water reuse if required and if acceptable by the Local Authority

5.2 Code Requirements

Stormwater site detention will comply with AS3500, City of Sydney Council, Australian rainfall and Runoff, Building Codes, Regulations, structural requirements and acceptable detention calculations to comply with the proposed development

5.3 Design Criteria

The design is proposed to calculated the rainfall catchment on site considering the new proposed development that considers time of overland flows, flood paths, site retention, rainfall intensities and grades and coefficients of surfaces and piped drains and incorporate the discharge factor as against the pre development discharge. There would be a requirement to construct storage and detention capacities to reduce the new proposed discharge to below or equal to current discharge rates. The proposed design would also consider retention and storage within the detention system for reuse storage capacity throughout the site.

The final design proposal would need to comply and be acceptable to City of Sydney council Engineering Department policy for the area.

6.0 Electrical Support Systems

6.1 General

Electrical support systems for pumps, fire systems and water treatment systems would connect to the main supply and have an emergency supply backup in accordance with the requirements of the Building Code Regulations, Supply Authorities and Codes having jurisdiction over the structure.

6.2 Code Requirements

These works shall comply with AS3000, electrical supply Authority Codes, Requirements and regulations, Australian Standards, supplier and Manufacturer requirements.

Any installation work on the proposed development would be carried out by a licensed installer.

7.0 Fire Services

7.1 General

The fire protection system will be designed for a Class 2 Building under 25m in height with underground or basement car parking for over 40 cars. Consideration of the services in the proposed design shall include any Fire Engineering Report, situation and use of the buildings and areas, any extra fire hazards and escape routes and free standing areas.

A Sydney Water pressure and flow certificate for the site is included as 'Annexure A' for this project.

7.2 Code Requirements

The code requirements would be Australian Standards, Building Code of Australia, City of Sydney Council requirements and NSW Fire Brigade Regulations.

7.3 Sprinklers

Code requirements are contained in AS2118, Associated Standards and Fire Engineers Report

7.4 Fire Hydrants

Code requirements are contained in AS2419 and Associated Standards, Codes, Regulations and Authority requirements

7.5 Fire Hose Reels

Code requirements are contained in AS1221 and Associated Standards, Codes, Regulations and Authority Requirements.

7.6 Automatic Fire Detection and Alarm System

Code requirements are contained in AS1670 and Associated Standards, Codes, Regulations and Authority Requirements

7.7 Portable Fire Extinguishers

Code requirements are contained in AS2444 and Associated Standards, Codes, Regulations and Authority requirements

7.8 Emergency Warning and Intercommunication System (EWIS)

Code requirements are contained in AS2220 and Associated Standards, Codes, Regulations and Authority requirements.

7.9 Fire Control Centres

Code requirements are contained in AS2220 and BCA, Associated Standards, Codes Regulations and Authority requirements.

7.10 Fire Extinguishers

Fire extinguishers are proposed throughout any proposed building to conform with BCA, Australian Standards and comply with use, distance and size to match the risk.

8.0 Building System Control

A building system control has not been established at this stage but a proposal would integrate all building services systems.

9.0 Environmental Considerations

The following are proposed environmental considerations applying to this proposal:

a) Reuse of roof water and rainwater run off.

b) Utilising solar energy for hot water preheat

c) Utilising waste heat from mechanical services for hot water pre heat

d) Using natural gas for heating

e) Utilising low water flow fixtures and tap ware within the proposal

f) Reuse rainwater for spray irrigation with rain and moisture detector controls

g) Utilising drip feed irrigation for planter areas with moisture detectors

h) Proposing a construction solid waste management and recycling plan

i) Proposing a demolition solid waste management and recycling plan

j) Proposing strict compliance with asbestos removal plan

k) Proposing an operational solid waste management and recycling plan on occupation.

l) Proposing recycling fire system test dumped water.

m) Proposing consideration to treat and recycle grey waste water

n) Propose the use of air admittance valves instead of terminating vent pipes on sanitary system.

o) Proposing the use of low front end loading washing machines and low energy dryers

p) Proposing the use of variable speed pumps