GBA Heritage

STATEMENT OF HERITAGE IMPACT

4-18 Doncaster Avenue, Kensington

December 2018

Cover Image
Perspective of proposal
Source: Hayball Architects

4-18 DONCASTER AVENUE, KENSINGTON

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1.0
INTRODUCTION

1.1 REPORT OVERVIEW

This report has been prepared as part of the Environmental Impact Statement (EIS) for State Significant Development (SSD) application number SSD 9649, and the redevelopment of 4-18 Doncaster Avenue, Kensington.

The Secretary's Environmental Assessment Requirements (SEARs) for this project note the following in relation to European heritage:

The EIS shall:

- *include a Heritage Impact Statement (HIS) prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual. The HIS is to address the impacts of the proposal on any heritage significance of the site and adjacent areas and is to identify the following:*
  - *all heritage items (state and local) within the vicinity of the site*
  - *the impacts of the proposal on heritage items including visual impacts*
  - *attempts to avoid and/or mitigate impacts on the heritage significance or cultural heritage values of the site and the surrounding heritage items*
  - *measures to protect adjoining heritage buildings during demolition, excavation and construction, including any relevant geotechnical and structural engineer reports.*

This report evaluates the proposed development, designed by architectural firm Hayball and concludes that the proposal will have an acceptable heritage impact.

It is noted that a previous Development Application DA/931/2015 was submitted and approved by Randwick City Council in 2016. The approved scheme was for the demolition of the existing dwellings at 4-8, 14 and 16 Doncaster Avenue and construction of a new three storey residential building comprising 48 apartments, retention and refurbishment of the existing terraces at numbers 10 and 12 Doncaster Avenue and basement parking for 71 vehicles.

GBA Heritage (formerly Graham Brooks and Associates) prepared a Statement of Heritage Impact in December 2015 to accompany DA/921/2015. Where applicable, relevant sections of the previous report which was submitted have been quoted within this report.

1.2 REPORT OBJECTIVES

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

1.3 METHODOLOGY AND STRUCTURE

This Statement of Heritage Impact has been prepared in accordance with guidelines outlined in the *Australia ICOMOS Charter for Places of Cultural Significance, 2013*, known as *The Burra Charter*, and the New South Wales Heritage Office (now the Heritage Division of the NSW Office of Environment and Heritage) publication, *NSW Heritage Manual*.

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

1.4 SITE IDENTIFICATION

The subject site is located on the eastern side of Doncaster Avenue, to the south of the intersection with Alison Road. The subject site comprises the following:

- 4-8 Doncaster Avenue - Lots 2 and 3, Section 30 of DP 5549, Lot 1 of DP 1094702 and Lot 1 of DP 974821;
- 10-12 Doncaster Avenue - Lot 1 of DP 981794, Lot 1 of DP 1033442 and Lot 51 of DP 2905;
- 14-16 Doncaster Avenue - Lot 52A and 52B of DP 400051; and
- 18 Doncaster Avenue - Lot 53 of DP 2905.

1.5 HERITAGE MANAGEMENT FRAMEWORK

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

As the subject site is not included on the World Heritage List, National Heritage List or Commonwealth Heritage List, and the development is not being undertaken by a Commonwealth agency, there are no heritage approvals required under the *EPBC Act* and no provision of the *Australian Heritage Council Act 2003* applicable to the proposed development.

NSW Environmental Planning and Assessment Act 1979 (EP&A Act)

The Secretary's Environmental Assessment Requirements (SEARs) for SSD 9649 note the EIS is to be consistent with the requirements of clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (the Regulation).

The *Randwick Local Environmental Plan (LEP) 2012* is the only EPI specified that includes heritage provisions.

The subject site includes the two storey, semi detached Victorian terraces located at 10-12 Doncaster Avenue, which are listed in Schedule 5 of the *Randwick LEP 2012* as an item of local heritage significance (I122).

The site is also located within the *Racecourse Precinct Heritage Conservation Area (C13)* listed in Schedule 5 of the *Randwick LEP 2012.*

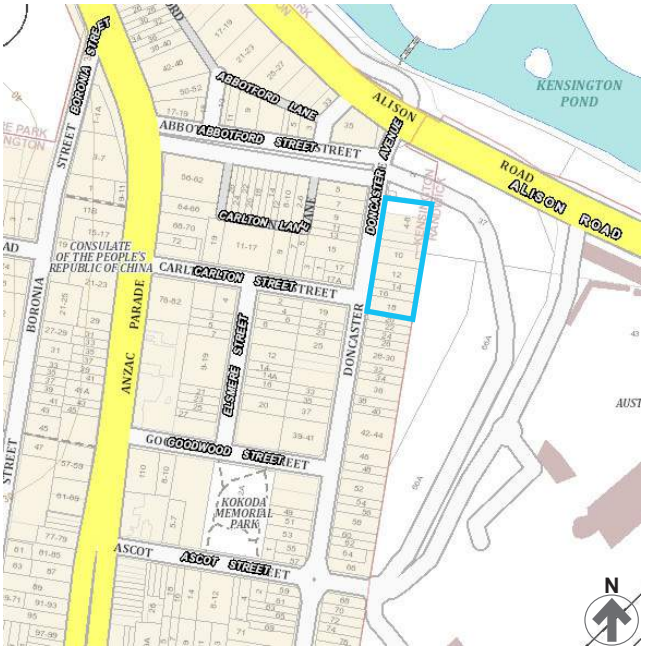

Figure 1.1
Location map showing the subject site outlined in blue.
Source: NSW LPI SIX Maps Website

Figure 1.2
Aerial view showing the subject site outlined in blue.
Source: NSW LPI SIX Maps Website

The site is also located in the vicinity of several heritage items listed in Schedule 5 of the *Randwick LEP 2012* (refer to Figure 1.3), the closest being:

- *Members' Stand/Official Stand, Royal Randwick Racecourse* located at 77-97 Alison Road, Randwick (I249; Local significance);
- *"Walsworth"*, Victorian cottage located at 25 Doncaster Avenue, Kensington (I123; Local significance);
- *"T'olle Goes" Federation House* located at 2-4 Carlton Street, Kensington (I112; Local significance);
- *Centennial Park, including Federation monument, superintendent's residence, park gates, Corinthian columns, 2 statues* located at 1R Oxford Street, 2R Darley Road and 1 Martin Road (I01: State significance); and
- *North Randwick Heritage Conservation Area* (C1; Local and State in part)

The analysis in this report focuses on the impact of the proposed development (if any) on the Victorian cottage *"Walsworth"* at 25 Doncaster Avenue and the Federation House, *"T'olle Goes"* at 2-4 Carlton Street, being the closest heritage items. The other listed heritage items in the wider location are physically and visually separated from the subject site by intervening development, distance and roadways. Consequently, the proposal will have no direct or specific impact on the heritage significance of these items and this report will focus on the proximate heritage items that require more detailed consideration of impact.

The *Randwick Development Control Plan (DCP) 2012* has not been included in the list of guidelines to be considered.

NSW Heritage Act 1977

The *NSW Heritage Act 1977* (Amended) is an Act to conserve the environmental heritage of New South Wales. The Act established the Heritage Council of NSW, and the State Heritage Register.

As the subject site is not included on the State Heritage Register there are no heritage approvals required under the NSW Heritage Act 1977 other than those that may be applicable to archaeology. These are considered in a separate report.

1.6 AUTHORSHIP

This report has been prepared by Kaylie Beasley, Senior Heritage Consultant, of GBA Heritage and has been reviewed by the Director, Graham Brooks. Unless otherwise noted, all of the photographs and drawings in this report are by GBA Heritage.

Figure 1.3
Extract from heritage map showing heritage items shaded brown, the conservation area hatched red and the subject site outlined in blue.
Source: Randwick Local Environmental Plan 2012, Sheet HER_001

1.7 REPORT LIMITATIONS

While this report is limited to the analysis of European cultural heritage values, GBA Heritage recognises that for over forty thousand years or more Aboriginal people occupied the land that was later to be claimed as a European settlement.

Recommendations have been made on the basis of documentary evidence viewed and inspection of the existing fabric.

Archaeological assessment of the subject site is outside the scope of this report.

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

1.8 COPYRIGHT

2.0
HISTORICAL SUMMARY

2.1 BRIEF HISTORY OF THE LOCALITY

The following overview provides an outline of the history of the Randwick Racecourse and the subject site located at 4-18 Doncaster Avenue, Kensington.

2.1.1 THE SANDY RACECOURSE (1832-1860)

In December 1832, a group of prominent colonists, including Sir John Jamison and Colonel Kenneth Snodgrass, petitioned Governor Bourke for a portion of land to be set aside for use as a racecourse close to Botany Road.[1] Official racing commenced in the autumn of 1833.[2]

Racing, as well as hurdle races and steeplechases, were held at the track. However, the track was of poor quality and began to deteriorate and by 1838 racing had moved to Homebush to a track on the Wentworth Estate established by the Australian Race Committee (ARC).[3]

The late 1850s saw the return of organised horse racing to Randwick, as a result of the Australian Jockey Club (AJC) (formerly the ARC) seeking a site with certainty of tenure to enable them to provide better amenities and in turn attract a larger membership, better horses and trainers and, overall, better racing. The AJC approached the Government to apply for a grant of the old Sandy Course at Randwick for use as a racecourse[4] and the first race meeting under the AJC was held from 29-31 May 1860.[5]

2.1.2 SUBDIVISION OF THE KESINGTON ESTATE (1887-1893)

In July 1887, with the closure of Busby's Bore, land in the vicinity of the former Lachlan Swamps became available for subdivision and residential development, Kensington became Sydney's first 'planned' suburb. The first area to be released for sale was the triangle

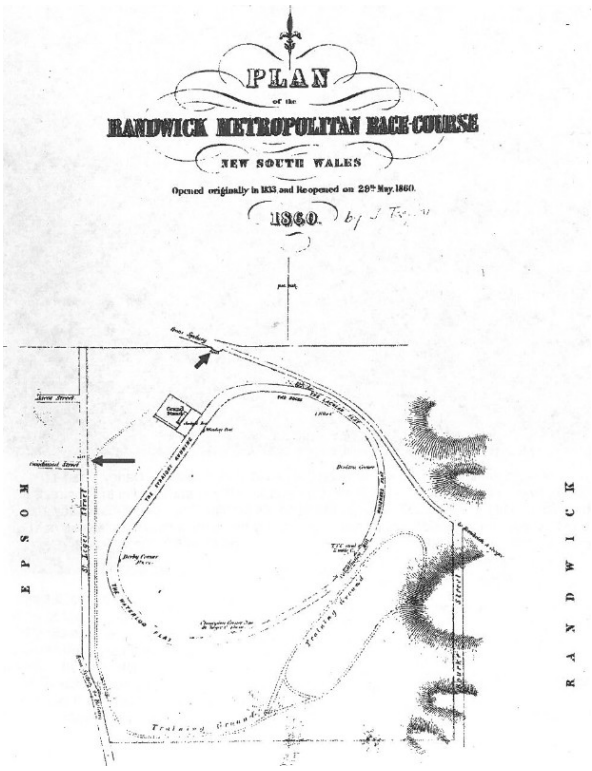

Figure 2.1
The Randwick Racecourse Map of 1860 illustrating the former name of Doncaster Avenue as St Ledger Street.
Source: State Records, Map No. 3484, 1922

now bounded by Doncaster Avenue, Anzac Parade and Alison Road. Relatively expensive housing prices were insisted upon to attract a higher class of resident.

The first subdivision of Section 1 of "The Model Suburb of Kensington" was offered at auction in April 1891.

The land was owned by the Australian Cities Investment Corporation Ltd and certain positive covenants attached to each of the lots. One such covenant required that the main building on these lots be of brick or stone or both, with a value of not less than £300.

The lots upon which 10-18 Doncaster Avenue are located were created at this time as part of the first subdivision of the Kensington Estate. Following the registration of Deposited Plan 2905 in 1893, the lots became known as Lots 50-53.

1 M. Painter and R. Waterhouse, *The Principal Club: A History of the Australian Jockey Club*, North Sydney, Allen & Unwin, 1992.
2 Lester Firth Associates, *Randwick Heritage Study*, 1986.
3 M. Painter and R. Waterhouse, *The Principal Club: A History of the Australian Jockey Club*, North Sydney, Allen & Unwin, 1992.
4 *ibid*.
5 P. Ashton and D. Waterson, *Sydney Takes Shape: A History in Maps*, Brisbane, Hema Maps Pty Ltd, 2000.

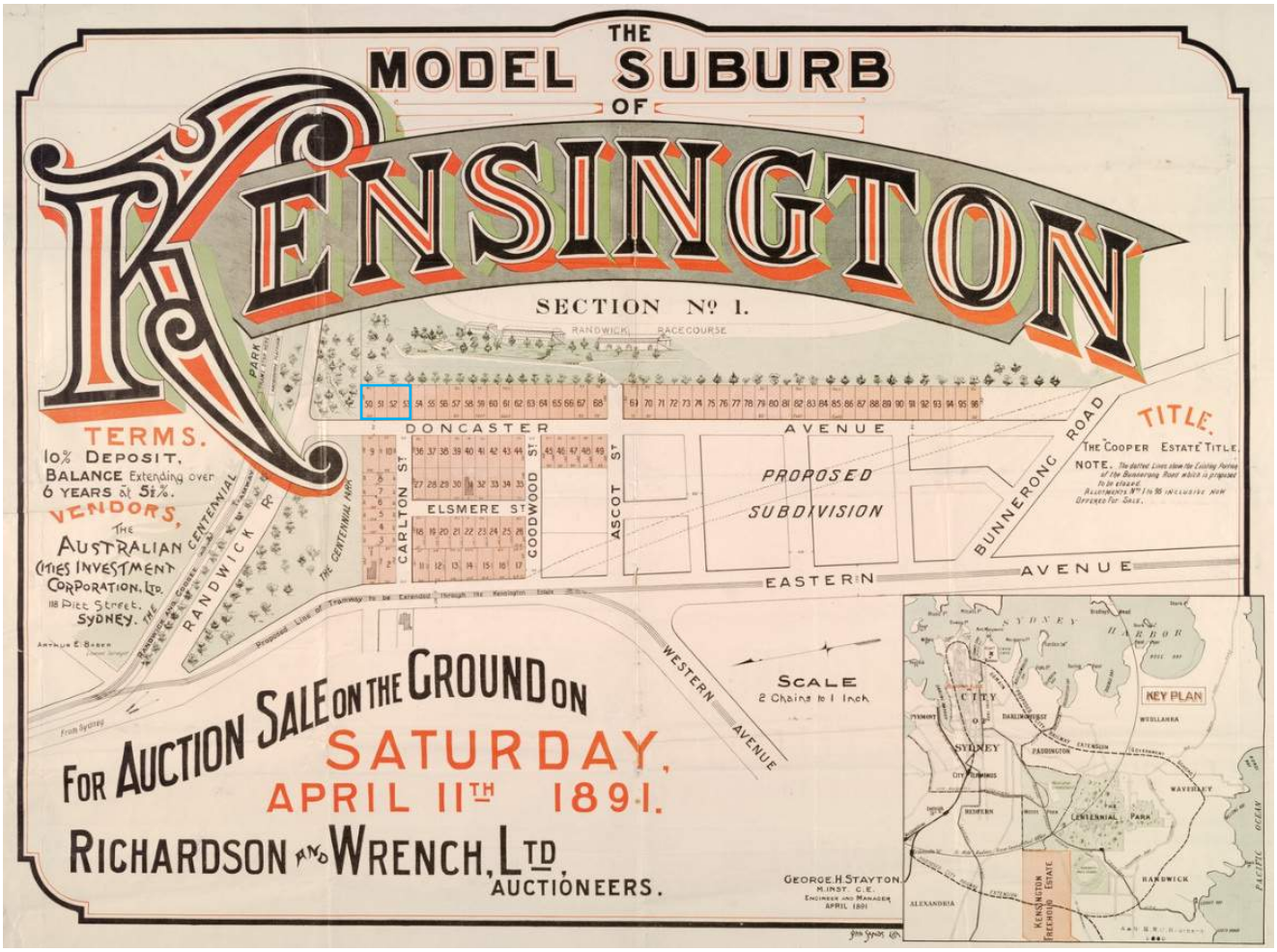

Figure 2.2
The plan of the model suburb of Kensington for auction, with 10-18 Doncaster Avenue outlined in blue. 4-8 Doncaster Avenue did not form part of this subdivision.
Source: State Library of NSW, 1891

2.1.3 CENTENNIAL PARK AND THE CENTENARY PARK SALE (1886)

The creation of the lots to the immediate north of Lots 50 and 51, where 4-8 Doncaster Avenue is located, is connected to the history of Centennial Park which lies to the north of the subject site.

In 1904, the *Centenary Park Sale Bill* was passed, creating a number of residential subdivisions along the border of Centennial Park. Protective covenants were placed on the land to exclude the building of terrace housing, wooden or commercial buildings.

The lots upon which 4-8 Doncaster Avenue is located were created as part of this subdivision and became known as Lots 2, 3 and 4 of Section 30 of the Centennial Parklands subdivision. The lots later became known as Lots 2, 3 and 4 in DP 5549.

2.2 4-8 DONCASTER AVENUE (c.1914)

The single storey Federation Arts and Crafts style house at 4-8 Doncaster Ave was erected around 1914 for use by senior Racecourse staff.

The lots which today comprise 4-8 Doncaster Avenue existed in their current configuration by December 1912.[6] Between July 1909 and 14 January 1918, the AJC gradually obtained ownership of each of the lots currently comprising 4-8 Doncaster Avenue, Kensington.[7] The land parcels were transferred to 'Adrian Knox, King's Counsel of Sydney, Chairman of The Australian Jockey Club' - the same Adrian Knox who would later be appointed as Chief Justice of the High Court of Australia.[8]

From 1914, *Sands Sydney Directory* records the house at 4 Doncaster Avenue. Between 1914 and

6 *CT Vol 2321, Fol 234; CT Vol 2281, Fol 246; CT Vol 2000, Fol 226; and CT Vol 2259, Fol 103.*
7 *CT Vol 2000, Fol 226; CT Vol 2281, Fol 250; CT Vol 2321, Fol 234; CT Vol 2816, Fol 20*
8 *1919-1930.*

1915, Charles Brown is recorded as the occupant. From 1916 to 1933 (when *Sands* records end), the occupant is recorded as George T Law, manager of Randwick Racecourse.

2.3 10-12 DONCASTER AVENUE (1896)

The two storey Victorian Filigree semi-detached terraces were constructed circa 1896, with the property at No 10 being used as stables or riding school by a series of owners.

Lot 50, DP 2905 (today part of 10 Doncaster Ave and identified as Lot 1, DP 1033442) was purchased by William Thomas Hoines - 'Horse Owner'- and his wife Alicia in March 1898.[9] Hoines sold the land to retired Major, Arthur Brooks in March 1912. In April of the same year, Major Brooks added part of Lot 4, DP 5549 to the property, possibly as part of his Kensington Riding School. This additional strip of land is today identified as Lot 1, DP 981704. Thus, by 1912, 10 Doncaster Avenue had obtained its current boundaries.[10]

Title deeds indicate that it was not until April 1974 that the lots which currently comprise 10 Doncaster Avenue, Kensington, were in the ownership of 'The Chairman of the Committee of the Australian Jockey Club'.[11]

Lot 51, DP 2905 (12 Doncaster Ave) was purchased by William Joseph Day in June 1901.[12] Other owners included James and Ada Evans (May 1906) and John Brown (Nov 1909),[13] Annie Flynn (March 1920), Robert and Lily Cole (Nov 1927), George Thear (August 1938), Mrs Norton (Aug 1943) and Lloyd Thearle and Paul Heathwood (Oct 1957).

Historic Water Board plans show a stables building towards the rear of 10 Doncaster Avenue in 1904. No.12 Doncaster Avenue also contained a stable block, as well as a number of sheds and a conservatory surrounding an asphalt covered yard. With the exception of the return along the boundary between 4 and 10 Doncaster Avenue, it appears that the majority of the outbuildings still existed in 1943.

No.10 Doncaster Avenue is described in an Order of Sale in April 1908 (*Sydney Morning Herald*) as a '2 storey House with large stabling'.[14]

The ownership of 12 Doncaster Avenue Kensington was transferred to 'The Chairman of the Committee of the Australian Jockey Club' in December 1957.[15]

The table below is an overview of the occupation of 10 Doncaster Avenue, as documented in the *Sands Directory* where the street numbers are recorded from 1920.

Year	Occupant
1896	First reference in *Sands* as 'Russley' (occupied by Edwin S Rowe).
1898	J Cornwall, horse trainer.
1899	William Hoins (purchased 10 Doncaster Avenue in 1898).
1908-1909	Charles Murphy.
1910-1913	Mrs E Preston, 'Russley'
1914-1930	Major Arthur Farrington Brooks, proprietor, Kensington Riding School, 'Russley'.

Arthur Brooks died in 1926 but his widow, Myra Elisabeth Brooks, remained living at 10 Doncaster Avenue until her own death in 1954.

The table below is an overview of the occupation of 12 Doncaster Avenue, as recorded in the *Sands Directory*.

Year	Occupant
1900-1906	William Day, (purchased 12 Doncaster Avenue in 1901).
1907-1909	James W Evans, (purchased 12 Doncaster Avenue in 1906). Known as 'Huntingdon'.
1910-1920	John Brown, 'Huntingdon' (purchased 12 Doncaster Avenue in Nov 1909).
1921	Frazer Flynn
1922 - 1928	Mrs Frazer Flynn. From 1922 to 1928, two occupants are recorded at Huntingdon.
1929-1933	Recorded as 'Brighton Flats' - generally with 2-3 occupants. Except in 1930 when 6 occupants are listed.

2.4 14-16 DONCASTER AVENUE (c.1911)

Lot 52 was purchased from the Australian Cities Investment Corporation Limited in 1896 by Mary Ann Payne, wife of Christopher Payne, Kensington tram conductor. It was subsequently sold in 1898 to labourer Henry Hartley.

9 *Vol 1242, Fol 124 (7 March 1898)*
10 *Dealings recorded in CT Vol 2259, Fol 103 and CT Vol 2000, Fol 226.*
11 *CT Vol 12411 Fol 51 (9 April 1974).*
12 *Dealing recorded in CT 1301 Fol 166 (dated 30 Nov 1899).*
13 *Dealings recorded in CT Vol 1362 Fol 148 (dated 13 July 1901).*
14 *Dealings recorded in CT Vol 3044, Fol 88.*
15 *Dealings recorded in CT Vol 3044, Fol 88.*

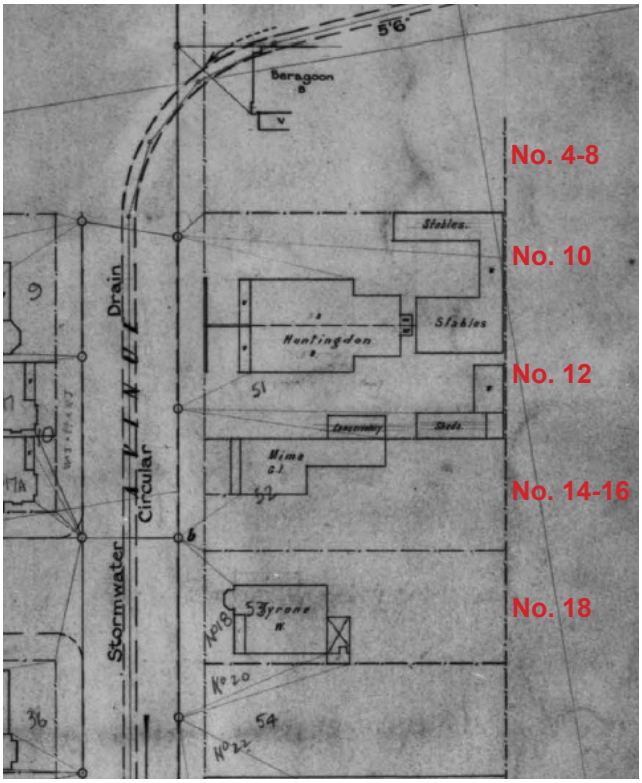

Figure 2.3
Detail of 1904 Water Board plan showing the development evident on the subject properties. Note the stable buildings at the rear of 10-12 Doncaster Avenue and the conservatory to the south of 10 Doncaster Avenue.
Source: Sydney Water Board, Sheet 67; Randwick, 1904

A Water Board survey carried out on Doncaster Avenue in 1904 showed that the site had been developed (see Figure 2.3). Unlike the neighboring buildings of brick and timber, the cottage known as "Mima" was shown as of corrugated iron [C.I.], suggesting that it may have been intended as a temporary structure. By 1910, however, this dwelling was missing from the *Sands Directory*, although "Huntington" to its north and the properties to its south were listed. It would indicate that this building was completely demolished, or under extensive alteration to accommodate the construction of No.16 as a semi-detached cottage.

The purchase of the site by Surry Hills gentleman, Patrick Keeshan, in 1907[16] may relate to the demolition of the original dwelling. 14-16 Doncaster Avenue was then sold in 1911 to warehouseman Ninian Charles Chandos Scouller.

The existing single storey Federation red face brick semi-detached dwelling at 14-16 Doncaster Avenue is believed to have been constructed in late 1910-early 1911. The semi-detached cottages were first occupied by Jackson Percy and Frederick Wilson respectively.

16 *Vol 1204 Folio 224, LPI*

By 1914, a new resident, Ernest Page, had moved into the premises, and remained such through subsequent occupations.

14-16 Doncaster Avenue was then occupied by the following:

Year	14 Doncaster Av	16 Doncaster Av
1914	Benjamin Brodie, commercial traveller	Frederick Wilson
1916	Benjamin Brodie	Frederick Wilson
1918	Benjamin Brodie	Frederick Wilson
1920	Stanley Martin	Frederick Wilson
1922	Miss Minnie Dargan	Frederick Wilson
1924	Miss Minnie Dargan	Frederick Wilson
1926	Ernest Gowan	Frederick Wilson
1928	Hans Nielsen	Frederick Wilson
1930	Robert Holmes	Frederick Wilson
1932	Robert Holmes	Frederick Wilson

The cottages stayed in the ownership of the Scouller family until the 1950s, when 14 and 16 Doncaster Avenue was acquired by the Perpetual Trustee Company (Limited). In 1958 No.14 Doncaster Avenue was transferred to sales manager Leslie Claude Hogg. 16 Doncaster Avenue was acquired by the War Service Homes in 1958, and the property was transferred to widow Elsie Vera Frawley in mid-1960. She remained owner of the property until 1986, when the registered proprietor became June Ethel Stace.[17]

None of the owners of 14-16 Doncaster Avenue had any association with the Randwick Racecourse or its affiliated activities.

The fabric of 14-16 Doncaster Avenue indicates that substantial changes were carried out to the buildings. They retained the arched window heads on the Doncaster Avenue elevation, but in the mid-twentieth century, when the semi-detached dwellings were sold by the Perpetual Trustee Company to Leslie Hogg and the War Services Homes respectively, alterations to the individual cottages began to be carried out, resulting in the inconsistency in the verandah posts, fence, windows, doors and the construction of the car port to No.16.

2.5 18 DONCASTER AVENUE

The property at 18 Doncaster Avenue was purchased from the Australian Cities Investment Corporation Limited by Martha Payne, wife of John James Payne of Kensington, Inspector of Tramways, in 1895. When constructed, 18 Doncaster Avenue was a large single

17 *Vol 7923 Fol138*

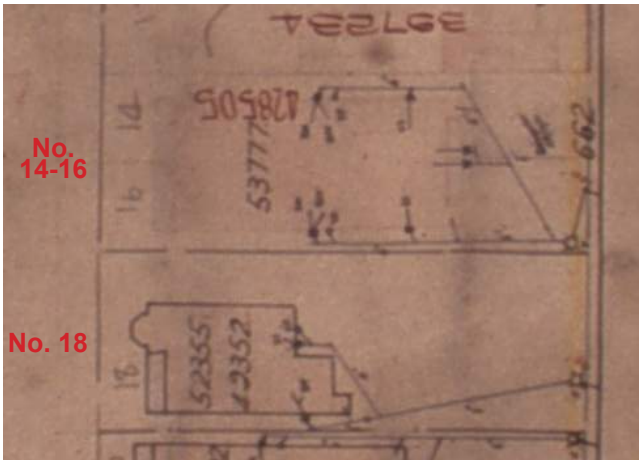

Figure 2.4
Detail of revised Water Board plan, 1929, showing Sydney Water drainage lines connected to two semi-detached dwellings on the site. Faint marks on the plan show the front verandas of the cottages.
Source: Sydney Water Board, Sheet 67; Randwick, 1929 (Rev)

storey timber and brick residence, as shown in the 1904 Water Board survey (see Figure 2.3).

Known as "Tyrone", the property was sold in 1907 to William Gleeson of Kensington, Superintendent, and subsequently transferred to the War Service Homes Commissioner in 1920. It was then purchased by Alice Cook, unmarried woman, in 1923 before being sold to the Chairman of the Committee of the AJC in 1927.[18]

The residence was clearly visible on the 1943 aerial photograph of the site but was demolished after that date to provide additional vehicle access to the Racecourse precinct.

2.6 AERIAL PHOTOGRAPHS (1930-1943)

It is evident from the 1930 and 1943 photographs (see Figures 2.5 and 2.6) that there were stables and outbuildings associated with 4-8 and 10-12 Doncaster Avenue. The outbuildings have been demolished to the east of 12 Doncaster Avenue. There was an outbuilding located between 4 and 10 Doncaster Avenue, visible in the 1930 aerial, which had been demolished by 1943.

14 -16 Doncaster Avenue had secondary structures in the rear of the yards (presumably the original water closet) while 18 Doncaster Avenue had a more substantial building, potentially a stables block, behind the main building (since demolished).

Figure 2.5
1930 aerial view of the subject properties outlined blue. The stables to the east of 10 and 12 Doncaster Avenue are visible, as is the observatory to the south of 12 Doncaster Avenue. The larger scale block at the rear of 18 Doncaster Avenue is clearly visible, as is the wc at the rear of 14 Doncaster Avenue.
Source: NSW LPI

Figure 2.6
1943 aerial view of the subject properties outlined blue. The stables to the east of 10 and 12 Doncaster Avenue are visible , as is the observatory to the south of 12 Doncaster Avenue. The larger scale block at the rear of 18 Doncaster Avenue is also visible, as it the wc at the rear of 14 Doncaster Avenue. 18 Doncaster Avenue was demolished after this date.
Source: NSW LPI SIX Maps Website

18 Vol 3034 Fol 56.

2.7 RELATIONSHIP WITH THE RANDWICK RACECOURSE

The foregoing analysis of the properties along this northernmost section of Doncaster Avenue has been made to determine the relationship with the adjacent Randwick Racecourse and its affiliated activities. In addition to tracing the Lands Title chain of the subject properties, several of the neighboring properties at 20-24 Doncaster Avenue, to the immediate south of the subject site, have also been examined to determine their role and connection with the historical activities identified as contributing to the significance of the *Racecourse Precinct Heritage Conservation Area* (HCA).

As demonstrated, 4-8 Doncaster Avenue has an established connection with the Randwick Racecourse and the AJC.

10 Doncaster Avenue also has a clear and long-term association with a riding school present since soon after its construction. 12 Doncaster Avenue also had a stables building at the rear, indicating a degree of connection with horse racing, and was later acquired in 1957 by the Committee of the AJC.

14-16 Doncaster Avenue was owned and occupied by a series of private individuals unconnected with the Racecourse, including a laborer, tram conductor and sales manager.

18 Doncaster Avenue originally had no association with the racecourse, and was the residence of the Inspector of Tramways. It was acquired by the AJC in 1927, and the building was demolished after 1943 to provide additional access to the Racecourse site.

20 Doncaster Avenue

The lands title chain shows the following list of owners:

- John Chandler of Leichhardt, builder (1910)
- Mary McCann, wife of Joseph McCann of Kensington, painter (1910)
- Margaret O'Reilly, widow (1919)
- Agnes Ellen Morris, widow (1921)
- John Stewart Morris, confectioner and Roy Morris, Sheriff's Officer (1923)
- Peta May Sutherland, married woman (1953)
- John Henry Garrett of South Coogee, squash court proprietor, and Thomas Garrett of Dubbo, Grain elevator Board employee (1966)
- John Henry Garrett of South Coogee, squash court proprietor (1973)
- Ivy Ethel Martin, Secretary, and Paul Ann Martin, Artist (1977)
- Douglas Richard Flaik (1981)
- The Chairman of the Committee of the AJC (1987).

22 Doncaster Avenue

The lands title chain shows the following list of owners:

- Henry Charles Morris of Glebe, gentleman (1911)
- Ida and Jenny Voight, spinsters of part (1914)
- Esther Balkind, wife of Zorach Balkind of part (1914)
- Annie Walker, wife of Alfred Walker, labourer (1920)
- Cecil John Sayle of Kensington, labourer (1937)
- Ruby Maud Sayle of Kensington, widow (1963)
- The Chairman of the Committee of the AJC (1989)

24 Doncaster Avenue

- John Charles Chandler of Leichhardt, builder (1910)
- Henry Charles Morris of Glebe, gentleman (1911)
- Henry Walter Edwards, of part (1914)
- Ida and Jenny Voight, spinsters (1914)
- Esther Balkind, wife of Zorach Balkind (1914)
- Martha Jane Napper, wife of William Napper of Randwick, builder (1919)
- Lilian Eva Boniface, widow (1923)
- Nickolaos Sakalides, laborer (1960)

It is evident that the buildings on the eastern side of Doncaster Avenue, at the northern end of the Racecourse Precinct HCA, have little historical connection with the Randwick Racecourse and its activities. 20 and 22 Doncaster Avenue were only acquired by the AJC in 1987 and 1989, while 24 Doncaster was owned and occupied by individuals with no association with the racing industry.

Of those properties along this north-eastern stretch of Doncaster Avenue, only 4-8 and 10-12 Doncaster Avenue had a clear relationship with the racecourse and/or the AJC.

It is concluded that in contrast with the dwellings at 20-24 Doncaster Avenue, which make both an aesthetic and architectural contribution to the Racecourse Precinct HCA, 14-16 Doncaster Avenue makes a negligible contribution to the HCA given the lack of historical, architectural or social associations.

3.0
SITE DESCRIPTION

3.1 URBAN CONTEXT

3.1.1 DONCASTER AVENUE: EAST

The subject site is located at the northern end of Doncaster Avenue within a residential area which has a predominant Victorian and Federation period architectural character. Buildings within the area range between single to four storey development and consist of detached and semi-detached dwellings, Victorian terraces and residential apartment blocks. Buildings are constructed in masonry.

To the east, the site adjoins the recently developed light rail holding yard (formerly part of the Randwick Racecourse site). The holding yard is a low rise structure with substantial floor plate. The structure extends the length of the subject site (and beyond) with a large masonry wall presenting to the eastern property boundary of the subject site.

3.1.2 DONCASTER AVENUE: WEST

Development immediately to the west of the site on Doncaster Avenue consists of masonry residential apartment blocks ranging from three to four storeys from the late twentieth century. Higher density residential development is located further to the west. Residential density deceases to the south along Doncaster Avenue, towards Goodwood Street, where residential apartments become more interspersed with single and double storey, freestanding, residential development.

3.2 VIEWS TO AND FROM THE SITE

Views to the site are primarily from the surrounding streets including Doncaster Avenue and Alison Road. Existing vegetation surrounding 4-8 Doncaster Avenue screens much of the dwelling from view along Doncaster Avenue and from Alison Road. The main (western) elevation of the pair of semi-detached terraces is clearly visible from Doncaster Avenue.

Figure 3.1
20-24 Doncaster Avenue, looking south along the streetscape at the single storey cottages that make a contribution to the Racecourse Precinct Heritage Conservation Area.

Figure 3.2
View looking south along the western side of Doncaster Avenue at the multi-storey residential apartment blocks.

Figure 3.3
View looking south-west from Alison Road at the light rail holding yard which is located along the eastern boundary of the subject site.

Views to the back (east) of the subject properties from the Randwick Racecourse are obstructed by a large masonry wall recently constructed as part of the light rail holding yard development.

Views from the site are to the north and south along Doncaster Avenue. There are no views between the site and Randwick Racecourse (refer to Figures 3.3 - 3.5).

Figure 3.4
View looking southwards towards the large masonry wall that extends along the boundary between the subject site and the adjacent light rail holding yard.

Figure 3.5
View from 4-8 Doncaster Avenue, looking south-eastwards towards the Randwick Racecourse. Note that all views are obscured by the masonry wall constructed along the rear boundary of the subject properties as part of the light rail holding yard development.

Figure 3.6
The subject site as viewed looking north along Doncaster Avenue, with 18 Doncaster Avenue, 14-16 Doncaster Avenue and 10-12 Doncaster Avenue all visible.

Figure 3.7
View of the semi-detached terraces located at 10-12 Doncaster Avenue as viewed from the western side of Doncaster Avenue.

Figure 3.8
View from the first floor front verandah of the semi-detached terrace at 10 Doncaster Avenue, with residential apartment development on the western side of Doncaster Avenue visible in the background.

3.3 DESCRIPTION OF 4-8 DONCASTER AVENUE

This section describes the interior and exterior of 4-8 Doncaster Avenue, Kensington.

3.3.1 EXTERIOR

This is a single storey Federation Arts and Crafts masonry bungalow with timber framed hipped roof clad in terracotta tiles and exposed rafters under the eaves. Projecting gables address the front and side elevations. Chimneys are finished in a stucco finish and are painted, and with terracotta chimney pots. Windows are double hung timber sash windows. Doors are timber. The wall above projecting brick course of the exterior walls is stucco finished and painted, and face brickwork below. There is a large verandah to north under a bullnose verandah roof, supported on timber posts.

Two large additions have been made to the original dwelling, to its northern and eastern elevations. These additions are readily discernible from the darker coloured roof tiles.

3.3.2 INTERIOR

Decorative cornices and ceilings are found throughout the original part of the dwelling. Doors are timber and windows are double hung, timber framed windows. Fanlights sit above the interior doors. Original timber joinery, including skirtings and picture rails, remain. The kitchen and bathroom fitouts are recent. There are major additions to the north and east of the dwelling.

3.3.3 CONDITION AND INTEGRITY

The 2014 Structural Engineer's Inspection for 4-8 Doncaster Avenue, Kensington, prepared by Mott MacDonald Australia, was prepared to determine the condition of the dwelling at 4-8 Doncaster Avenue.

The summary of the discussion in the Structural Engineer's Inspection report is below:

- *Whilst the majority of the house appears reasonably stable, the movement in the north wing is quite severe.*
- *The entire external surface is coated in a rough cast render which shows signs of patching at previous cracking so it is likely that there has been historical movement in this building in addition to that which is currently evident.*
- *The amount of movement is such that it is likely that underpinning would be required to provide a reasonable level of security.*
- *Remedial works design, such as underpinning would require extensive geotechnical investigation.*
- *Roof damage due to water ingress is however more readily repairable, although the full extent would need to be determined by a carpenter with physical testing of the timber.*

The structural report concluded the extent of structural damage associated with differential settlement is significant and is likely to require substantial stabilisation by underpinning or other foundation stabilisation methods. It is also expected that termite damage will be found. Roof damage appears to be localised to the south-west area of the roof although some damage is likely over the northern wing where the roof will have flexed with the tilt of this wing.

Figure 3.9
The northern elevation of 4-8 Doncaster Avenue. The darker tiles illustrate the later additions made to the rear of the dwelling. The room under the projecting gable to the right is also a later addition.

Figure 3.10
The southern elevation of 4-8 Doncaster Avenue, as viewed from the first floor of the semi-detached terrace at 10 Doncaster Avenue. The main elevation to the street is to the west.

Figure 3.11
Detail showing as example of the cracking to the exterior of 4 Doncaster Avenue.

Figure 3.12
Detail of exterior showing cracking.

Figure 3.13
The living area within 4-8 Doncaster Avenue. Decorative plaster ceilings and cornices are visible in the foreground. A large structural beam illustrates where the dwelling was extended and associated cracking.

Figure 3.14
Detail of interior showing cracking and ceiling separation at beam.

Figure 3.15
A bedroom within the rear addition to 4-8 Doncaster Avenue.

Figure 3.16
The living room within the rear addition to 4-8 Doncaster Avenue.

3.4 DESCRIPTION OF 10-12 DONCASTER AVENUE

This section describes the interior and exterior of 10-12 Doncaster Avenue, Kensington.

3.4.1 EXTERIOR

10 - 12 Doncaster Avenue is a two storey semi-detached Victorian Filigree terrace constructed in masonry. The exterior walls were previously tuckpointed and have been painted over. Doors are timber, including French doors, and sash windows are double hung. There is a rear two storey wing with gable roof over. A party wall divides the pair of terraces. The main terracotta tiled roof is hipped, with two small gables at each end of the ridgeline. The roof continues down over the two storey front verandah to the main facade of the terraces.

Cast iron columns and decorative cast iron frieze work and brackets decorate the verandah. Painted timber rafters with timber lining above, sit on the underside of the verandah roof. The first floor of the verandah consists of timber floorboards and the ground floor consists of recent tiling over a cement slab. Brick chimneys have been painted.

A cast iron front fence extends across the Doncaster Avenue frontage set within a sandstone plinth. The cast iron fence and the sandstone plinth have been painted. Tessellated tiled pathways lead up to the front verandah of each of the semi-detached terraces.

10 Doncaster Avenue has a single storey verandah to the rear.

There is a two storey rear wing to 10 and 12 Doncaster Avenue extending to the rear boundary. The northern elevation at 10 Doncaster Avenue is clad in vertical slabs and has two sets of French doors, clearstory windows and double hung windows. This wing has a gable roof.

12 Doncaster Avenue has a series of additions and infills to the rear. There is a enclosed area to rear with glass sliding doors leading out onto a patio area. A fibro clad infill sits between the rear of terrace and the carport.

3.4.2 INTERIOR OF 10 DONCASTER AVENUE

The original component of the terrace contains two rooms on the ground floor and first floors and a two storey wing to the rear with ancillary rooms.

The main bedroom on the first floor features two sets of double French doors leading on to a first floor balcony fronting Doncaster Avenue. The internal staircases feature decoratively turned balusters and newel posts.

The main living areas contain marble fire places and a large opening between two main rooms. There are recent cornices and plasterboard ceilings throughout, as are timber picture rails and skirting boards. The timber balustrade still remains, though has been painted. Doors are generally four panel, timber doors and with fanlights over internal doors. There is a marble fire place surround in the front room on the first floor and the fire place in the back room on the first floor has been filled in. Timber French doors lead out to the front verandah on first floor. There are recent kitchen and bathroom fitouts in rear wing to main building. The building at the rear has been adapted into studio and storage spaces.

3.4.3 INTERIOR OF 12 DONCASTER AVENUE

Decorative plaster ceilings and cornices are found throughout. Doors are generally four panel, timber doors, with fanlights over internal doors. Floors are polished timber floorboards. There is a set of double bifold timber doors between two main living spaces on the ground floor and marble surround to the fire place in the dining room. The fire place surround still remains in the front room on the first floor.

The original timber balustrade to the staircase remains. There is a decorative archway in main entry hall. Coloured glass surrounds the front door, in the fanlights and sidelights around main entry. Double French timber floors lead out to verandah from front room on first floor. The kitchen and bathroom fitouts within the rear wing are recent.

3.4.4 CONDITION AND INTEGRITY

Overall, the pair of terraces at 10-12 Doncaster Avenue are generally in sound condition. The integrity of both terraces is diminished through alterations and additions, with the removal of some original fabric.

10 Doncaster Avenue

Of the pair of terraces, 10 Doncaster Avenue is of a higher integrity. It retains more of the original detailing, such as timber joinery, decorative ceilings and cornices.

12 Doncaster Avenue

12 Doncaster Avenue has been extensively altered at both ground and first floor levels including:

- opening out of rear rooms, and new additions to the southern, side elevation

- an extension at the rear of the property to accommodate a modern kitchen and covered outdoor entertaining area; and

- the reconfiguration of the rear portion of the first floor.

Figure 3.17
The front facade of the semi-detached terraces at 10-12 Doncaster Avenue with the decorative cast iron decoration to the two storey verandahs.

Figure 3.18
The main entry of the semi-detached terrace at 10 Doncaster Avenue looking through the modified archway towards the staircase.

Figure 3.19
The painted timber balustrade within the semi-detached terrace at 10 Doncaster Avenue.

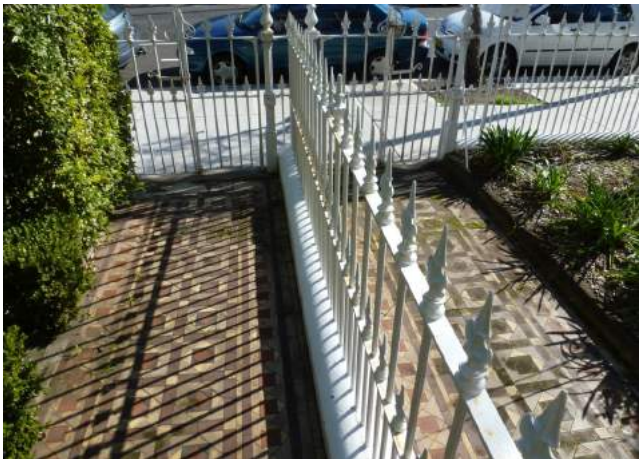

Figure 3.20
View of the cast iron palisade front fence, with sandstone plinth, and the tessellated tiled footpaths leading from the front boundary to the front verandahs of both 10 and 12 Doncaster Avenue.

Figure 3.21
The southern elevation of the semi-detached terrace at 12 Doncaster Avenue illustrating the alterations and additions and the carport at the rear of the terrace.

Figure 3.22
The living area in the semi detached terrace at 10 Doncaster Avenue. The fire place and its marble surround and the timber skirting are still intact. Ceilings and cornices have been replaced.

Figure 3.23
The main bedroom located in the front section of the first floor of the semi-detached terrace at 10 Doncaster Avenue. Two sets of French doors lead out onto the front verandah. The fireplace and marble surrounds still remain.

Figure 3.24
The main living and dining area in the semi-detached terrace at 12 Doncaster Avenue. Large timber bifold doors divide the spaces. The marble fireplace surround remains, to the right.

Figure 3.25
The rear section of the semi-detached terrace at 12 Doncaster Avenue. The corner fireplace still remains. The rest of the space has been reconfigured as part of later additions.

3.5 DESCRIPTION OF 14-16 DONCASTER AVENUE

3.5.1 EXTERIOR

14-16 Doncaster Avenue is a pair of single storey semi-detached cottages constructed c.1911 and modified in subsequent decades. Externally, they present with unpainted face brick on the Doncaster Avenue elevation, and painted brickwork on the secondary elevations. The semi-detached cottages have a tiled roof and exposed eaves batons. The original front porch columns have been unsympathetically replaced, and c.1980s awnings added to the main elevation. The front garden of 16 Doncaster Avenue has been paved, whilst No.14 retains a path to the front entrance. No.14 also has a c.1970s car port addition. Both dwellings have also been modified at the rear elevations. Overall, they demonstrate restrained architectural detailing, having lost much of their character.

The existing interwar brick fence along the frontage of 14-16 Doncaster Avenue is similarly unsympathetic, as are the unmatched c.1970s gates. They are unexceptional and eroded examples of their architectural type, making a restrained or low-key contribution to the Racecourse Precinct Heritage Conservation Area.

3.5.2 INTERIOR OF 14 DONCASTER AVENUE

14 Doncaster Avenue retains decorative ceilings and details through much of the interior of the building. Some secondary rooms, however, lack ceiling details. Doors are timber and those surviving original windows are double hung, timber framed windows. The opening on the Doncaster Avenue elevation has been modified, with a large single pane of glass below two original timber framed windows. The rear of the building has been treated similarly, with large unsympathetic aluminium framed windows.

Fanlights have been enclosed. Original timber joinery, including skirtings and picture rails, remain. The kitchen and bathroom fitouts are recent. There are major additions to the north and east of the dwelling.

3.6 INTERIOR OF 16 DONCASTER AVENUE

As with No.14, 16 Doncaster Avenue retains decorative ceilings in the hallway and in some secondary rooms. Doors are timber and those surviving original windows are double hung, timber framed windows. The surviving fanlights over are intact.

Original timber joinery, including skirtings and picture rails, remain. The kitchen and bathroom fitouts are contemporary, but with the exception of the rear lounge, much the original configuration of the building has been retained.

3.6.1 CONDITION AND INTEGRITY OF 14-16 DONCASTER AVENUE

14-16 Doncaster Avenue appear to be in satisfactory condition. However, both cottages have heavily diminished integrity through successive alterations to the fabric that have irrevocably and negatively affected their presentation within the streetscape. Both of the cottages have been modified on their primary elevations by combining two original windows, and have been heavily adapted at the rear of the buildings, entailing substantial changes in fabric. They retain selected original details, but overall cannot be considered as good or intact examples of their architectural type.

Figure 3.26
View of 14-16 Doncaster Avenue, looking north-east.

Figure 3.27
14 Doncaster Avenue, showing car port and awning addition. Note later fence with brick posts.

Figure 3.28
16 Doncaster Avenue, showing unsympathetic metal verandah posts and railing, non-original tiles and garden paving.

Figure 3.29
Interior of 16 Doncaster Avenue. Living room, with original transom over the door and decorative ceiling details.

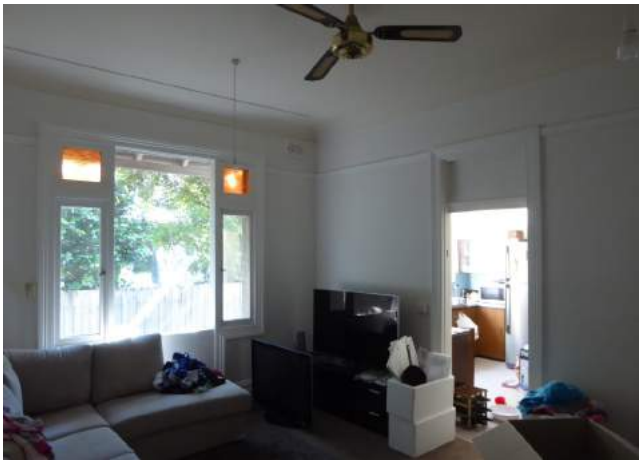

Figure 3.30
Interior of 14 Doncaster Avenue, showing changes to the fabric including enclosure of the fanlight over the door.

Figure 3.31
Kitchen of 16 Doncaster Avenue, showing contemporary fitout and new window.

Figure 3.32
Rear of 16 Doncaster Avenue, showing alterations to the fabric.

Figure 3.33
Rear of 14 Doncaster Avenue, showing changes to the brickwork and window opening, with unsympathtic cladding and aluminium framed window, showing rear details.

3.7 DESCRIPTION OF 18 DONCASTER AVENUE

18 Doncaster Avenue is a vacant site, as the original residence was demolished after 1943 by the AJC. The eastern boundary is defined by the large masonry wall which forms part of the light rail holding yard development.

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3.8 SYDNEY WATER STORMWATER PIPE

An historic Sydney Water stormwater pipe crosses the subject site from east to west, before turning south into Doncaster Avenue. The pipe passes below the dwelling located at 4-8 Doncaster Avenue.

A report prepared by K.R Stubbs & Associates for 4 Doncaster Avenue, dated 16 April 2015 (refer to Appendix 3), provided the following comments in relation to the stormwater pipe:

1. The existing brick house at 4 Doncaster Avenue, Kensington is located over a Sydney Water 1650mm diameter concrete stormwater pipeline known as Lachlan Swamps Channel No.59. The original brick stormwater pipeline was constructed in 1895.

2. Sydney Water has a current policy that any building over the stormwater assets interferes with their ability to maintain and reconstruct these assets. Accordingly, building over stormwater assets is not permitted. Where opportunities arise to redirect stormwater pipe around new development, this is typically the preferred option. Sydney Water has already given consent for this diversion to take place.

3.The Mott MacDonald Structural Report conclude that it is likely the house will require substantial stabilisation by underpinning, pipe bridging or other foundation stabilisation methods. The extent of any proposed stabilisation works will require prior approval from Sydney Water Building Plan Approval.

4.Sydney Water would consider the extent of re-development of the site and would only allow the cottage to remain over the pipeline if it is the only feasible solution to facilitate reasonable development of the site.

5. Sydney Water would assess the remaining life of the stormwater asset and may require deviation or re-construction of the asset where the remaining life of the asset is less that the expected life of the renovated cottage.

Figure 3.34
Looking east across the site of 18 Doncaster Avenue.

Figure 3.35
Looking east towards the racecourse. Note that the all views are obscured by the masonry wall constructed along the rear boundary as part of the light rail holding yard development.

6. In view of the age of the stormwater pipeline (built in 1895) K.R. Stubbs & Associates would expect Sydney Water to require the pipeline to be re-constructed or deviated.

3.9 FLOOD PRONE LANDS

The subject site is identified by the Randwick City Council as being flood affected with an average depth of 0.7m of water expected on site during a 1 in 100 year flood event.[1]

1 BG&E Pty Limited, *4-12 Doncaster Avenue Kensington Flood Assessment*, 2 October 2014

4.0

ASSESSMENT OF CULTURAL SIGNIFICANCE

4.1 INTRODUCTION

The NSW Heritage Inventory entry for 10-12 Doncaster Avenue does not contain a formal Statement of Significance. Therefore, an analysis of cultural significance has been undertaken and a Statement of Significance prepared.

Heritage, or "cultural" value, is a term used to describe an item's value or importance to our current society and is defined as follows in *The Australia ICOMOS Burra Charter,* 2013, published by Australia ICOMOS (Article 1.0):

Cultural significance means **aesthetic, historic, scientific** or **social** or **spiritual value** for past, present or future generations.[1]

This section establishes the criteria which are used to understand significance and identifies the reasons for the cultural value of the site and its components.

Significance may be contained within, and demonstrated by, the fabric of an item; its setting and relationship with other items; historical records that allow us to understand it in terms of its contemporary context, and in the response that the item stimulates in those who value it.[2] The assessment of significance is not static. Significance may increase as more is learnt about the past and as items become rare, endangered or illustrate aspects that achieve a new recognition of importance.

Determining the cultural value is at the basis of all planning for places of historic value. A clear determination of significance permits informed decisions for future planning that will ensure that the expressions of significance are retained and conserved, enhanced or at least minimally impacted upon. A clear understanding of the nature and degree of significance will determine the parameters for, and flexibility of, any future development.

A historical analysis and understanding of the physical evidence provides the context for assessing the significance. These are presented in the preceding sections. An assessment of significance is made by applying standard evaluation criteria to the facts of the item's development and associations.

1 *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance,* 2013, p.2

2 ie "social", or community, value

4.2 ANALYSIS OF CULTURAL SIGNIFICANCE

The following commentary discusses how each of the criteria established by the New South Wales Heritage Office (now the Heritage Division of the NSW Office of Environment and Heritage) relate to the subject site.

Criterion (a) – An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)

10-12 Doncaster Avenue demonstrates the Victorian pattern of development of this part of the Kensington area. Its lot boundaries were formed as part of the first subdivision of the 'Model Suburb of Kensington, ' offered at auction in 1891, and its architectural details clearly show its period of construction.

Criterion (b) - An item has strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area)

The historical research for 10-12 Doncaster Avenue did not reveal any persons of particular importance in the local community who were associated with the history of the subject site.

Criterion (c) - An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)

10-12 Doncaster Avenue is a two storey semi-detached Victorian Filigree masonry terrace that displays many of the main characteristics of Victorian domestic architecture. They make an aesthetic contribution to the street and the Racecourse Precinct Heritage

Conservation Area through the use of elements including cast iron columns and decorative cast iron frieze work and brackets, but do not demonstrate a high degree of creative or technical achievement.

Criterion (d) - An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons

10 Doncaster Avenue has an association with the racing community, with a stables constructed to the rear of the building and connected with the equestrian use of the adjoining Randwick Racecourse.

Criterion (e) - An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)

10-12 Doncaster Avenue is believed to have been the first buildings erected on the site. As a Victorian Filigree building, it is of a common architectural type and does not have the potential to add to the existing body of knowledge about the development of the local area.

Criterion (f) - An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)

10-12 Doncaster Avenue is one of a number of similar Victorian Filigree semi-detached terraces in the local area. It cannot be considered uncommon, rare or endangered within the local context.

Criterion (g) - An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments)

10-12 Doncaster Avenue does not demonstrate the principal characteristics of a class of NSW cultural places.

4.3 STATEMENT OF SIGNIFICANCE

10-12 Doncaster Avenue demonstrates the Victorian pattern of development of this part of the Kensington area. Its lot boundaries were formed as part of the first subdivision of the 'Model Suburb of Kensington, ' offered at auction in 1891, with its architectural details clearly showing its period of construction.

It is a two storey semi-detached Victorian Filigree masonry terrace, constructed circa 1896. The main terracotta tiled roof is hipped, with two small gables at each end of the ridgeline and continues down over the two storey front verandah to the main facade which consists of cast iron columns and decorative cast iron frieze work and brackets. Chimneys are painted.

The building is one of a number of similar Victorian Filigree semi-detached terraces in the local area. As a Victorian Filigree building, it is of a common architectural type and does not have the potential to add to the existing body of knowledge about the development of the local area.

10 Doncaster Avenue has an association with the racing community, with a stables constructed to the rear of the building and connected with the equestrian use of the adjoining Randwick Racecourse through its Kensington riding school.

4.4 GRADING OF SIGNIFICANCE

10-12 Doncaster Avenue, Kensington, has been carefully assessed to determine a relative grading of significance into five levels. This process examines a number of factors, including:

Relative age
Original design quality
Degree of intactness and general condition
Extent of subsequent alterations
Association with important people or events
Ability to demonstrate a rare quality, craft or construction process

Grading reflects the contribution the element makes to the overall significance of the item (or the degree to which the significance of the item would be diminished if the component were removed or altered).

EXCEPTIONAL SIGNIFICANCE
Includes rare or outstanding building fabric that displays a high degree of intactness or can be interpreted relatively easily.

HIGH SIGNIFICANCE
Includes the original extant fabric and spaces of particular historic and aesthetic value. Includes extant fabric from the early phases of construction.

MODERATE SIGNIFICANCE
Includes building fabric and relationships which were originally of higher significance but have been compromised by later, less significant modifications.

LITTLE SIGNIFICANCE
Includes most of the fabric associated with recent alterations and additions made to accommodate changing functional requirements. These are components generally of neutral impact on the site's significance.

INTRUSIVE
Recent fabric, which adversely affects the significance of the site.

Grading has been established as a valuable tool, to assist in developing appropriate conservation measures for the treatment of the building and its various elements. In general, good conservation practice encourages the focussing on change, or upgrading of, an historical building/site to those areas or components which make a lesser contribution to significance. The areas or components that make a greater or defining contribution to significance should generally be left intact or changed with the greatest care and respect.

GRADING OF SIGNIFICANCE	SITE ELEMENTS
EXCEPTIONAL	There are no elements of the subject site considered to be of Exceptional significance
HIGH	Overall form of front component and street presentation Rooms within the main component of the semi-detached terraces including living, dining, bedrooms, entry and halls on the ground and first floor levels Two storey front verandahs
MODERATE	Rear wings Storage room and studio at 10 Doncaster Avenue Structure containing carport at 12 Doncaster Avenue Outbuildings
LITTLE	Ground floor addition to the semi-detached terrace at 12 Doncaster Avenue Alterations to interiors
INTRUSIVE	There are no elements of the subject site considered to be Intrusive

Figure 4.1
Grading for the ground floor of the semi-detached terraces at 10-12 Doncaster Avenue.

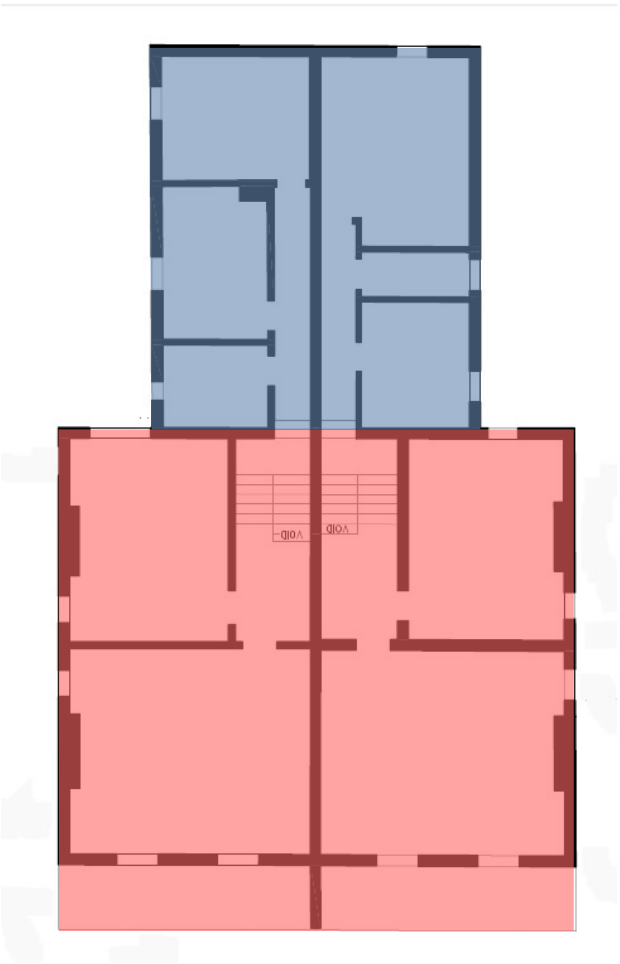
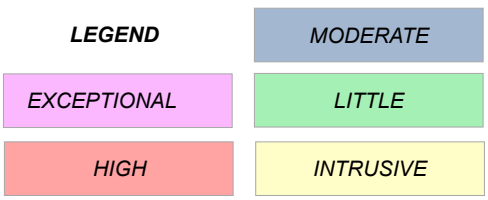


Figure 4.2
Grading for the first floor of the semi-detached terraces at 10-12 Doncaster Avenue.



5.0

ESTABLISHED HERITAGE SIGNIFICANCE OF THE LOCALITY

5.1 RACECOURSE PRECINCT HERITAGE CONSERVATION AREA

5.1.1 STATEMENT OF SIGNIFICANCE

The subject site is located within the boundaries of the Racecourse Precinct Heritage Conservation Area (HCA) listed in Schedule 5 of the *Randwick LEP 2012.*

The following Statement of Significance has been sourced from Randwick City Council.

> ***Aesthetic Significance**:*
> *The racecourse, together with Centennial Park and Moore Park, further to the north and east, forms one of the largest areas of open space in the eastern suburbs of Sydney.*
>
> *The Racecourse provides an outlook for parts of the suburb of Randwick on higher ground to the east, and the University of New South Wales, to the south. The major build features of note are the stands, particularly the 1910 Members Stand, and the oval shaped course. Other racecourse buildings are located behind the stands in the north-west corner of the site, and close to the street frontages. The large modern grandstand is out of scale with its older neighbours but has become a local landmark.*
>
> *The frontages to Alison Road, Wansey Road and High Street have avenue plantings of Port Jackson and Moreton Bay Figs, Plane trees and Brush Box, which enhance the visual amenity of these streets. In the north-west corner of the site there are Canary Island Date Palms and formal garden plantings.*
>
> *The residential properties on the eastern side of Doncaster Avenue form a straight street frontage of almost a kilometre in length, with a predominantly Victorian and Federation period character. This housing is representative of the larger Kensington precinct, on either side of Anzac Parade.*
>
> *The most common building types are one storey Federation period detached and semi-detached houses. These mostly stand on narrow lots and have consistent setbacks and verandah and roof designs. There are also a large number of Victorian period one and two storey houses, and two storey terraces. The unity of the streetscape is disturbed to some degree by Post-War period three storey flat buildings, but to a lesser degree than the remainder of the historical Kensington precinct.*
>
> ***Historical Significance**:*
> *The racecourse is historically significant for its early reservation as an official racecourse, in 1833. It has been in continuous use as a racecourse since the first regular meetings held in 1863. This is probably the longest period of any racetrack in Australia. The racecourse retains much original fabric from the nineteenth and early twentieth centuries. It is the best preserved Victorian and Federation period racetrack in Sydney.*
>
> *Randwick Racecourse developed in parallel with the present City of Randwick. The racecourse, and the many stables and worker's cottages in the surrounding area, demonstrate the process of development of the racing industry, and its importance to the commercial life of the district. This includes housing and stables on some of the properties fronting Doncaster Avenue.*
>
> *The residential properties on Doncaster Avenue demonstrate the process of suburbanisation which took place in the late nineteenth and early twentieth centuries. This was the first part of Kensington to develop, and has a higher proportion of Victorian housing as a consequence. The housing (Victorian/Federation) is representative of the first stage of Kensington's suburban development, prior to West Kensington (Federation/Inter-War). The street also has a close connection with the racecourse and the racing industry.*
>
> ***Social Significance**:*
> *Randwick Racecourse is held in high esteem*

by members of the Australian Jockey Club, the racing industry, and past and present race-goers. Royalty has visited the facility on several occasions, giving the course special prestige in Australian thoroughbred racing. The physical environment of "Royal Randwick" is an important part of the experience of a race day.

Doncaster Avenue shares a close physical and visual link with the racecourse. It is a major route for pedestrian access to the racecourse. Doncaster Avenue is also appreciated by the community as part of an important local period landscape and streetscape.

5.1.2 CONTRIBUTION OF THE SUBJECT SITE TO THE CONSERVATION AREA

4-8 Doncaster Avenue

Aesthetic Significance
4-8 Doncaster Avenue is makes a limited aesthetic contribution to the HCA due to its isolated location at teh extreme north-western edge of the HCA, where it is shielded from public view by a high wall and extensive tree cover. The visual separation of the dwelling by the two storey Victorian terraces at 10-12 Doncaster Avenue, limits its contribution to the distinctive and dominant historic architectural character of the Federation cottages located further south in Doncaster Avenue.

Historic Significance
The property has historical connections with the Randwick Racecourse.

Historic Association
The property was acquired by the AJC for use as a staff residence for George Thomas Law, manager of Randwick Racecourse, who was the occupant between 1916 to 1933.

10-12 Doncaster Avenue

Aesthetic Significance
The semi-detached terraces at 10-12 Doncaster Avenue contribute to the residential properties on the eastern side of Doncaster Avenue which form a straight street frontage of almost one kilometre in length, with a predominantly Victorian and Federation period character. It is a good example of Victorian Filigree architecture which is relatively intact on its principal facade.

Historic Significance
10-12 Doncaster Avenue demonstrates the late 19th century Victorian pattern of development of this part of the Kensington area. Its lot boundaries were formed as part of the first subdivision of the 'Model Suburb of Kensington, ' offered at auction in 1891, and its architectural details clearly show its period of construction. There is some use and ownership connections with the racing industry and the AJC.

Historic Association
10 Doncaster Avenue has an association with the racing community, with a stables constructed to the rear of the building and connected with the equestrian use of the adjoining Randwick Racecourse.

14-16 Doncaster Avenue

Aesthetic Significance
14-16 Doncaster Avenue are a pair of semi-detached single storey dwellings. They are unexceptional, heavily modified examples that do not retain many of the key architectural characteristics of their type and, as a result, do not contribute top the aesthetic significance of the HCA.

Historic Association
As with the other properties in this part of Doncaster Road, the property reflects early twentieth century subdivision and development. It has no association with the Racecourse or the historical activities associated with the racing industry.

Social Significance
14-16 Doncaster Avenue has no associations that constitute social significance.

18 Doncaster Avenue

Aesthetic Significance
18 Doncaster Avenue does not make an aesthetic contribution to the HCA. The building on the site was demolished by the Australian Jockey Club after 1943.

Historic Significance
18 Doncaster Avenue has no historical significance beyond its being one of many allotments formed and sold during the subdivision of the Model Suburb of Kensington.

Historic Association
18 Doncaster Avenue has no associations with individuals or significance in the local area. It was acquired by the AJC during the interwar period and the building was demolished for the construction of a driveway access through to the racecourse.

5.2 HERITAGE ITEMS IN THE VICINITY

There are a number of individually listed heritage items in the vicinity of the subject site. These are listed in Schedule 5 of the *Randwick LEP 2012.*

The analysis in this report focuses on the impact of the proposed development (if any) on I123 Victorian cottage *"Walsworth"* at 25 Doncaster Avenue and Federation House, *"T'olle Goes"* at 2-4 Carlton Street, being the closest heritage items.

The NSW Heritage Inventory contains the following information for these items:

Walsworth, Victorian Cottage
25 Doncaster Avenue, Kensington
Database entry number 2310219

Statement of Significance: Good example of Late Victorian cottage. Would have been amongst the earliest houses in the area. One of the few to survive more or less unaltered.

Construction years: 1894-
Physical description: Late Victorian style cottage. L-shape plan with semi-hexagonal bay below gable. Has its own unusual double curved roof. Main roof now terra cotta with bullnosed verandah. Original verandah posts replaced by solid masonry piers and balustrade. Otherwise appears more or less unaltered. Retains elaborate mouldings around windows and on brackets to eaves of bay. Also note lacework frieze. Capable of remedy. Original palisade fence.

T'olle Goes, Federation House
4 Carlton Street, Kensington
Database entry number 2310135

Construction years: 1900-

Physical description: Excellent Federation style corner house, c.1900. Brick construction, unfortunately painted upstairs (but in sympathetic darker colour). Double-L plan, with verandah/ balcony on both street frontages. Supported on cast iron posts. Iron lace brackets and fringes. Frieze on verandah, balustrade on balcony. Original stone fence with cast iron infill. Concrete tiled roof is reasonably sympathetic. Otherwise little altered.

Figure 5.1
Aerial view showing the relationship between the subject site (outlined blue) and the heritage items in the vicinity.
Source: NSW LPI SIX Maps Website

6.0

DESCRIPTION OF THE PROPOSAL

The proposed redevelopment of 4-18 Doncaster Avenue, designed by Hayball Architects, is detailed in the plans and supporting documentation that accompany this application. It includes:

- Demolition of the existing dwellings located at 4-8 Doncaster Avenue and 14-16 Doncaster Avenue;
- Demolition of the rear wings and outbuildings of 10-12 Doncaster Avenue;
- Conservation and adaptation of the retained semi-detached terraces located at 10-12 Doncaster Avenue to accommodate two 3 bed clusters and 2 common living areas;
- Construction of new two-storey addition to the rear of 10-12 Doncaster Avenue; and
- Construction of new three-storey building across the site of 4-18 Doncaster Avenue, consisting of three-levels of student accommodation and administration space and one basement level of parking.

The aim of the proposal is to develop the site for affordable student accommodation in accordance with the provisions of *State Environmental Planning Policy (Affordable Rental Housing) 2009* whilst respecting the important features of the heritage item located at 10-12 Doncaster Avenue, the surrounding HCA and other heritage items in the vicinity.

Drawings assessed as part of this Statement of Heritage Impact include:

Drawings by Hayball Architects, dated 19.12.18		
Drawing No.	**Title**	**Rev.**
TP00.00	Cover Sheet	1
TP01.01	Existing Site Plan	1
TP01.02	Proposed Site Plan	1
TP02.02	Basement Plan	1
TP02.02	Ground Floor Plan	1
TP02.03	Level 1 Plan	1
TP02.04	Level 2 Plan	1
TP02.05	Roof Plan	1
TP02.06	Ground - Floodwater channel locations	1
TP03.01	Elevations	1
TP03.02	Part Elevations	1
TP03.03	Floodwater Channel Locations	1
TP04.01	Section A&C	1
TP04.02	Section B,D,E	
TP05.01	Demolition Floor Plan - 10-12 Doncaster Ave	1
TP05.02	Detail Floor Plans - 10-12 Doncaster Ave	1
TP05.03	West Elevation - 10&12 Doncaster Ave	1
TP05.04	South Elevation- 10&12 Doncaster Ave	1
TP05.05	East Elevation- 10&12 Doncaster Ave	1
TP05.06	North Elevation- 10&12 Doncaster Ave	1
TP06.01	Area Plans GFA	1
TP06.02	Shadow Diagrams	1
TP06.03	Shadow Diagrams	1
TP06.04	Shadow Diagrams	1
TP06.05	Shadow Study- Southern Interface - landscape	1
TP06.06	Shadow Study - Southern Interface 21st June	1
TP06.07	Shadow Study - Communcal Room	1
• Design Report : 4-18 Doncaster Ave, Kensington, prepared by Hayball Architects, 19 December 2018		

Figure 6.1
View south-east from Doncaster Avenue of the proposed development.
Source: Hayball Architects

Figure 6.2
View north-east from Doncaster Avenue of the proposed development.
Source: Hayball Architects:

7.0

ASSESSMENT OF HERITAGE IMPACT

7.1 INTRODUCTION

This Statement of Heritage Impact has been prepared in relation to the following impact assessment criteria: the *Randwick Local Environmental Plan (LEP) 2012* and the New South Wales Heritage Office (now the Heritage Division of the NSW Office of Environment and Heritage) guidelines, *Altering Heritage Assets* and *Statements of Heritage Impact*.

This section of the report provides a detailed analysis of the statutory controls applying to this site, with regard to heritage.

7.2 CONSIDERATION OF THE GUIDELINES OF THE NSW HERITAGE DIVISION

The NSW Heritage Office (now the Heritage Division of the NSW Office of Environment and Heritage) has published a series of criteria for the assessment of heritage impact. The relevant 'questions to be answered' in the *NSW Heritage Manual* 'Statements of Heritage Impact', provided below, have been considered in the preparation of our assessment:

The following aspects of the proposal respect or enhance the heritage significance of the item or conservation area for the following reasons:

- The proposal is located at the extreme north-western end of the HCA.
- Retention of the principal section of the heritage-listed terraces located at 10-12 Doncaster Avenue and their Victorian features.
- The scale, form and materiality of the proposed rear addition to 10-12 Doncaster Avenue will be both sympathetic and clearly legible as a later structure.
- New bathroom services will be limited to the new rear additions of 10-12 Doncaster Avenue, ensuring that the spatial integrity of the rooms and significant fabric is retained within the heritage item.
- The existing presentation of the heritage-listed terraces at 10-12 Doncaster Avenue will be retained and there will be no change to its existing contribution to the HCA.
- The proposed demolition of 4-8 Doncaster Avenue is acceptable given its limited contribution to the HCA, coupled with the extent of physical deterioration, considerable repair and conservation costs, potential stormwater pipe upgrade and flood risk.
- The proposed demolition of 14-16 Doncaster Avenue is considered acceptable as the dwellings have no historical associations with the development of the racecourse and do not contribute positively to the aesthetic values of the HCA.
- The physical separation of the heritage-listed terraces at 10-12 Doncaster Avenue from the new building will ensure that the heritage item is retained within an appropriate visual heritage curtilage.
- The modulated facade of the new building into a series of pavilions, in addition to the articulated form and massing of the pavilions directly adjacent to the heritage-listed terraces at 10-12 Doncaster Avenue, makes reference to the heritage item and the rhythm of the Doncaster streetscape.
- The upper storey of the pavilions located directly adjacent to the heritage-listed terraces at 10-12 Doncaster Avenue, will give the impression of rooms in the roof due to the materiality, providing a gradual transition to the existing one and two storey scale of the heritage item located at 10-12 Doncaster Avenue and the adjacent cottages located to the south.

- The proposal will not obstruct any significant identified views within the HCA, or between the site and the heritage items at 25 Doncaster Street and 2-5 Carlton Street.

- The extent to which the heritage items at 25 Doncaster Street and 2-5 Carlton Street are appreciable by the public will be retained.

The following solutions have been considered and discounted for the following reasons:

- Initially it was proposed to adapt the heritage item at 10-12 Doncaster Avenue for adminstration/ office use. The current proposal is to retain the heritage items historical use as a residence, albeit student accommodation. This is considered to be appropriate because the heritage item will retain its historical use and the adaptation will have minimal impact on extant significant features.

- Student accommodation requires common areas to be provided. Historically, the downstairs portion of the terraces would have hosted the living and dining rooms with accommodation provided upstairs. The option of locating the common areas on the ground floor, within the front room was considered. However, the front rooms on the upper level are larger and will accommodate all the necessary facilities that a common area is required to contain, such as a kitchen, without detracting from the spatial integrity of the space or requiring the removal of significant fabric. The residents will be at liberty to utilise both the ground floor and first floor verandahs.

- The option of increasing the setback of the new building pavilion, located south of the heritage item, was considered in order to improve oblique sight lines toward the heritage item along the street. The loss of rooms that this would generate would impact on the financial viability of the entire development and was not pursued.

Demolition of a Building or Structure

- *Have all options for retention and adaptive re-use been explored?*
- *Can all of the significant elements of the heritage item be kept and any new development be located elsewhere on the site?*
- *Is demolition essential at this time or can it be postponed in case future circumstances make its retention and conservation more feasible?*
- *Has the advice of a heritage consultant been sought? Have the consultant's recommendations been implemented? If not, why not?*

Comment:

The demolition of the following buildings are proposed as part of the development:

- 4-8 Doncaster Avenue; and
- 14-16 Doncaster Avenue.

4-8 Doncaster Avenue

Given the dwelling's extent of physical deterioration, the considerable repair and conservation costs, potential stormwater pipe upgrade, flooding and its limited contribution to the HCA, the proposed demolition is considered to be acceptable.

A structural inspection of the dwelling was undertaken by Mott MacDonald in 2014 (see Appendix 1). It was determined that the current condition of the house, with substantial cracking and other deterioration, is such that major and extensive rectification works, including underpinning, replacement of flooring and roofing, upgraded bathrooms and kitchen and repair of termite damaged joinery, would be required.

Cost estimates for these rectification works were prepared by WT Partnership (see Appendix 2), with the estimated cost for carrying out the rectification works to the dwelling amounting to some $1,224,000.00 in 2015.

Additionally, any major repairs or rectification works are likely to generate a requirement by Sydney Water for the stormwater pipe that runs under the building to be diverted around the building (see Appendix 3). It was estimated by WT Partnership that the stand alone cost for the redirection or diversion of the stormwater pipe would be approximately $931,000.00 in 2015. The combined effect of the cost of rectification works and the diversion of the pipe, in the absence of a large scale residential project, was estimated in 2015 to be in the order of $2 million.

In addition to the above, the main floor level of the dwelling is located below the required flood hazard level. Construction of necessary flood barriers around the property would also impose an additional significant cost.

Overall, the retention and conservation of the dwelling at 4-8 Doncaster Avenue is not realistic or reasonable.

The contribution of the dwelling to the HCA is largely related to its historical role as accommodation for senior Racecourse staff in the early and middle decades of the twentieth century.

Its relatively isolated location at the extreme north-western edge of the HCA and the northern end of Doncaster Avenue, where it is shielded from public view by a high wall and extensive tree cover, means that it has not been a substantial contributor to the aesthetic character or significance of the HCA for many decades. The visual separation of the dwelling provided by the earlier two storey Victorian terraces at 10-12 Doncaster Avenue, also limits its aesthetic contribution to the distinctive and dominant historic architectural character of the tightly packed, small, narrow Federation style cottages further south in Doncaster Avenue.

Therefore, it is considered that the loss of the contributory building at 4-8 Doncaster Ave is relatively marginal given that this building is located at the extreme northern end of Doncaster Ave, as a character streetscape, and at the extreme north western corner of the HCA.

Given the scope of the proposal, demolition of the dwelling at 4-8 Doncaster Avenue and the outbuildings at 10-12 Doncaster Avenue cannot be postponed. It is considered unreasonable that the existing dwelling at 4-8 Doncaster Avenue be retained and new development be located elsewhere on site, given the condition of the dwelling, required works and limited contribution to the HCA.

To mitigate any potential impact that the demolition of the dwelling from the HCA may have, it is recommended that an archival photographic recording be undertaken, prior to demolition.

14-16 Doncaster Avenue
The existing buildings at 14-16 Doncaster Avenue make little to no historical or aesthetic contribution to the HCA.

Assessment of the property at 14-16 Doncaster Avenue has determined that they are degraded and unexceptional examples of a common architectural type. As a result, retention of 14-16 Doncaster Avenue is not considered necessary given their diminished integrity and lack of association with the principal historical activities of the area.

Major/Minor Partial Demolition

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

Comment:
The following partial demolition is proposed as part of the development:

- Rear wings and outbuildings to the semi-detached terraces at 10-12 Doncaster Avenue

The proposed partial demolition is not essential for the heritage item to function, however, in the context of the development demolition of the rear wings and outbuildings is preferable in order to allow for conservation of the principal section of the heritage-listed terraces.

No important features of 10-12 Doncaster Avenue are to be removed as part of the proposed demolition. Features, such as the cast iron detailing in the front verandahs, tessellated tiling in the front paths, chimneys, stairs, balustrades, decorative plaster ceilings, cornices, timber joinery, fireplaces and timber floor boards will be retained and conserved.

As detailed in Section 4.4 of this report, the rear wings of the terraces are graded to be of moderate significance. The rear wings are original and, although, more restrained in design and utilitarian in use, do demonstrate the basic design and form of late nineteenth century terrace. Given the overall retention and conservation of the principal sections of the terraces, the loss of some original fabric is considered to be acceptable. Any potential loss of significance that their removal from the site may cause can be mitigated by the undertaking of a photographic archival recording of the rear wings prior to demolition.

Taking into account the subsidiary character of the outbuildings at 10-12 Doncaster Avenue, used for storage / studio and carports, and their low level of integrity, their retention and reuse is not considered necessary from a heritage perspective.

The outbuildings in the rear yard are of no architectural distinction and their removal will have no adverse impact on the significance of the heritage item. .

The proposed demolition of the rear wings and outbuildings is not a result of the condition of the fabric.

Minor Additions

- *How is the impact of the addition on the heritage significance of the item to be minimised?*
- *Can the additional area be located within an*

existing structure? If no, why not?

- *Will the additions tend to visually dominate the heritage item?*
- *Are the additions sympathetic to the heritage item? In what way (eg form, proportions, design)?*

Comment:
The following minor additions are proposed as part of the development:

- Two storey addition to the rear of the heritage item;
- Close wall openings between living and dining areas on ground floor;
- Installation of new kitchen facilities in the two front, upper level rooms of 10-12 Doncaster Avenue; and
- New fence.

Rear Addition
Any potential impact of the proposed new two-storey addition will be minimised by the small scale of its overall form and location to the rear of the heritage item. The addition will be painted brickwork to complement the heritage item, however, its flat roof form will ensure that it is identifiable as a contemporary addition.

The proposed addition will accommodate four bathroom spaces. These services could be located within the main component of the terraces, however, it is desirable they are not in order to retain the spatial integrity of the rooms and significant features.

Visually, the proposed addition will be subservient to the terraces due to its form, scale, materiality and siting. Additionally, it will not be visible from Doncaster Avenue.

The proposed form, scale, materiality and siting of the proposed rear addition will be sympathetic to the heritage item.

Wall Openings
At present the living and dining rooms in each dwelling, located on the ground floor, are connected by an opening along the eastern wall. In No. 12, this opening contains a bi-fold door. It is proposed that this bi-fold door is removed and both wall openings are filled in to create two separate bedroom spaces. This proposed work would not detract from the original spatial integrity of the terraces because these are likely to be later openings, or the living and dining rooms would have always been quite distinct spaces, and filling in the existing opening will reinforce this separation.

Kitchens
Kitchen facilities will be installed in the new common spaces which are proposed to be located in the front rooms on the upper level of the terraces. The services will be located along the party wall and due to the size of the rooms their spatial integrity will not be adversely impacted. It is recommended that any associated pipework be located discreetly and that original features are not obstructed or removed.

It is noted that the final location of all required internal services is to be reviewed at a later stage when final sizes of these services are confirmed. It is recommended that all new services are to be surface mounted if possible rather than chased into existing walls or structures to minimise impact on heritage fabric. Where new penetrations or fixings are proposed, it is recommended that the Heritage Consultant be advised of exact locations and nature of penetrations/fixings for review and comment prior to works being undertaken.

Fence
A new vertical fin fence will be installed along the street boundary of the subject site, excluding in front of 10-12 Doncaster Avenue, where the existing fence will be retained. This new fencing will provide a contemporary interpretation of the existing picket and palisade fencing, complementing the dominate character of fences along the eastern side of Doncaster Avenue.

New Development Adjacent to a Heritage Item

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

Comment:

The above questions apply to assessing the potential impact on the adjacent heritage item (10-12 Doncaster Avenue), the HCA and other heritage items located in the vicinity.

The new building will be clearly contemporary, however, it has been designed to be sympathetic to the adjacent heritage item located at 10-12 Doncaster Avenue and the surrounding HCA.

The proposed new building will be physically separated from the heritage item located at 10-12 Doncaster Avenue, ensuring an adequate visual curtilage is retained.

Currently, the heritage item has a lot boundary curtilage. This will be reduced, however, the proposed curtilage will allow the heritage item to remain interpretable by the public from the public domain.

In order to mitigate the slightly increased scale of the new building, the pavilions located to the south and directly to the north of the heritage item will have an articulated form and massing through the use of robust vertical and horizontal elements, which will make reference to the heritage item. Additionally, the upper storey of the new development will give the impression of rooms in the roof due to the materiality, providing a gradual height transition to the existing one and two storey scale of the heritage item located at 10-12 Doncaster Avenue and the adjacent cottages located to the south.

Modulation of the street-facing facade into a series of distinct pavilions and articulation will also be utilised to break up the overall scale and building form of the proposal to be more respectful of the rhythm of the streetscape.

The proposed use of brick and a neutral colour tones will be compatible with the character of the HCA.

The proposed development is required to be located adjacent to the semi-detached terraces at 10-12 Doncaster Avenue and within the HCA as the subject site is inclusive of the terraces located within the conservation area.

The most significant elevation of the heritage item at 10-12 Doncaster Avenue is it western elevation, facing Doncaster Avenue. The proposed development will not adversely impact the ability of the public to view this elevation and the significance of the building generally.

Views to the northern and southern (side) elevations of the terraces at 10-12 Doncaster Avenue will be reduced, however, this is considered acceptable as these are secondary side elevations.

Measures to protect the heritage item at 10-12 Doncaster Avenue during demolition, excavation and construction are detailed in Section 6.6 of the Geotechnical Investigation report prepared by Douglas Partners, dated December 2018.

Two heritage items are located within the visual catchment of the subject site, they include the Victorian cottage, *"Walsworth"*, located at 25 Doncaster Avenue and the Federation House, *"T'olle Goes",* located at 2-4 Carlton Street.

The proposed new building will be clearly contemporary in design, however, impact of the proposal on these heritage items will be mitigated by the following:

- Both heritage items in the vicinity will be physically and visually separated from the new development by a minimum width of Doncaster Avenue.
- The proposed modulation of the street-facing facade into a series of distinct pavilions and articulated form will reduce the bulk and scale of the new building and be more respectful to the heritage items in the vicinity.

The existing curtilages of the heritage items in the vicinity will be retained.

No significant views to and from the heritage items in the vicinity of the site have been identified. Although the proposed development will be seen in some views there will be no adverse impact resulting from the minor change to the urban context.

Overall, there will be no adverse impact on the heritage items in the vicinity, and the public will still be able to view and appreciate their significance.

7.3 HERITAGE OBJECTIVES OF THE RANDWICK LEP 2012

The proposed development is considered to be acceptable, from a heritage perspective, for the following reasons:

- The proposed demolition of 4-8 Doncaster Avenue is acceptable given its structural instability and the conclusion that its removal will have little impact on the character of the Doncaster Avenue streetscape and the HCA.

- The significance of the heritage item located at 10-12 Doncaster Avenue, and its ability to contribute to the Doncaster streetscape, and the HCA will be retained.

- The removal of some original fabric is considered acceptable given that original features of the heritage item at 10-12 Doncaster Avenue, such as cast iron detailing in the front verandahs, tessellated tiling in the front paths, chimneys,

stairs, balustrades, decorative plaster ceilings, cornices, timber joinery, fireplaces and timber floor boards will be retained and conserved.

- The proposed demolition of 14-16 Doncaster Avenue is considered to be acceptable as the dwellings have severely diminished integrity and do not contribute to the aesthetic or historical values of the HCA.

- The physical separation of the heritage-listed terraces at 10-12 Doncaster Avenue from the new building will ensure that an appropriate visual curtilage is maintained.

- The modulated facade of the new building into a series of pavilions, in addition to the articulated form and massing of the pavilions directly adjacent to the heritage-listed terraces at 10-12 Doncaster Avenue, makes reference to the heritage item and the rhythm of the Doncaster streetscape.
- The upper storey of the pavilions located directly adjacent to the heritage-listed terraces at 10-12 Doncaster Avenue, will give the impression of rooms in the roof due to the materiality, providing a gradual transition to the existing one and two storey scale of the heritage item located at 10-12 Doncaster Avenue and the adjacent cottages located to the south.

- The public's ability to appreciate the significance of the heritage item and conservation area will be retained.

The proposal is, therefore, considered to be consistent with the relevant heritage objectives of the *Randwick LEP 2012,* which are:

> ***5.10 Heritage conservation***
> *(1) Objectives*
> *The objectives of this clause are as follows:*
> *(a) to conserve the environmental heritage of Randwick,*
> *(b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,*

7.4 LEC PLANNING PRINCIPLES

The NSW Land and Environment Court has recently determined a range of cases that have generated what it calls Planning Principles. These Planning Principles pose a series of questions and are useful when considering the potential impact of any proposed development on an existing situation. Those of relevance to the proposed development are reviewed below.

Helou v Strathfield Municipal Council [2006] NSWLEC 66
This planning principle applies only to contributory items in a conservation area, not to listed heritage items. The judgement defines a contributory item in a conservation area as *a building that is not individually listed as a heritage item, but by virtue of age, scale, materials, details, design style or intactness is consistent with the conservation area, and therefore reinforces its heritage significance*.

Five key questions are addressed in this Planning Principle to assess whether the demolition should be permitted. These questions are addressed below in relation to the proposed demolition of the existing dwelling at 4-8 Doncaster Avenue, Kensington.

1. What is the heritage significance of the conservation area?

The heritage significance of the *Racecourse Precinct Heritage Conservation Area* (HCA) is based primarily on the Royal Randwick Racecourse. The role of the various historic houses along Doncaster Avenue is secondary and historically supportive of the core heritage values of the Precinct, as recognised in the 2006 CMP. In their own right the group of distinctive, small scale early twentieth century Federation style racecourse staff cottages interspersed with some older Victorian houses (including Nos. 10-12), some historic stables and variety of late twentieth century residential apartment blocks, are collectively regarded as forming a distinctive streetscape.

2. What contribution does the individual building make to the significance of the conservation area? - The starting point for these questions is the Statement of Significance of the conservation area. This may be in the relevant LEP or in the heritage study that led to its designation. If the contributory value of the building is not evident from these sources, expert opinion should be sought.

The contribution of 4-8 Doncaster Avenue is primarily historical, given its early role as senior racecourse staff housing. Its isolated location, individualistic architectural style and scale, and general lack of streetscape presence, reduces the visual or aesthetic contribution to the Doncaster Avenue component of the overall HCA. The subject house is isolated from the other early twentieth century houses to the south by the visual presence of the two storey Victorian semi-detached terraces at 10-12 Doncaster Avenue. Construction of the adjacent light rail holding yard and associated large masonry wall, to the immediate east

of 4-8 Doncaster, further reduces its spatial and visual linkages with the racecourse.

3. Is the building structurally unsafe? - Although lack of structural safety will give weight to permitting demolition, there is still a need to consider the extent of the contribution the building makes to the heritage significance of the conservation area.

Expert engineering assessment of the building has revealed a series of significant structural and fabric deterioration aspects that will require extensive underpinning, repair and rebuilding (refer to Appendix One).

4. If the building is or can be rendered structurally safe, is there any scope for extending or altering it to achieve the development aspirations of the applicant in a way that would have a lesser effect on the integrity of the conservation area than demolition? - If the answer is yes, the cost of the necessary remediation/rectification works should be considered.

Rendering the building safe, including the provision of some new additions will have a marginally lesser impact on the integrity of the HCA, given the relative small scale of the building and the isolation of the site within the wider HCA.

The scale and location of the subject house on its current site prevents the development of a new student accommodation complex of any reasonable scale, should the building and a suitable garden curtilage be retained.

5. Are these costs so high that they impose an unacceptable burden on the owner of the building? Is the cost of altering or extending or incorporating the contributory building into a development of the site (that is within the reasonable expectations for the use of the site under the applicable statutes and controls) so unreasonable that demolition should be permitted? - If these costs are reasonable, then remediation/rectification (whether accompanied by alteration and/or extension or not) should be preferred to demolition and rebuilding.

The costs involved in the repair and potential reconstruction of sections of the house are high and would impose an unreasonable burden on potential future owners. However, it is not just the repair costs that must be taken into consideration. Sydney Water will require that the large historic stormwater pipe that passes below the house, which may be contributing to the structural failure, be either upgraded in-situ or diverted. This will add considerable costs to any future residential re-use as a single house, imposing grossly unreasonable costs when compared to the value of the property. The proposed redevelopment project has the financial capacity and includes the redirection of the stormwater line.

Despite the costs involved, if the house was to be renovated, its main floor level remains below the required flood hazard level for the locality, and the building has little protection from the major flood flows entering the site from the north-west, unless substantial flood barriers are erected.

6. Is the replacement of such quality that it will fit into the conservation area? - If the replacement does not fit, the building should be retained until a proposal of suitable quality is approved.

The proposed new development is of high quality architectural design and achieves a sympathetic scale and massing in relation to both the immediate streetscape and the retained presence of the heritage item at 10-12 Doncaster Avenue.

Following the above analysis, it is considered that the proposed demolition of the dwelling at 4-8 Doncaster Avenue meets the fundamental tests of this LEC Planning Principle.

7.5 RECOMMENDED MITIGATION MEASURES

- An archival photographic recording should be undertaken prior to works commencing on site. The archival recording should specifically include the dwelling at 4-8 Doncaster Avenue and the rear wings and outbuildings proposed to be demolished at 10-12 Doncaster Avenue. The recording should also include context photographs of the existing site as viewed from the street.

- All new services within 10-12 Doncaster Avenue, are to be surface mounted if possible rather than chased into existing walls or structures to minimise impact on heritage fabric. Where new penetrations or fixings are proposed, it is recommended that the Heritage Consultant be advised of exact location and nature of penetrations/fixings for review and comment prior to works being undertaken.

8.0

CONCLUSIONS AND RECOMMENDATIONS

8.1 CONCLUSIONS

- The subject site 4-18 Doncaster Avenue is located within the Racecourse Precinct Heritage Conservation Area which is listed in Schedule 5 of the *Randwick LEP 2012* as a conservation area of local significance.
- 10-12 Doncaster Avenue which falls within the boundaries of the subject site is individually listed as an item of local heritage significance in Schedule 5 of the *Randwick LEP 2012*.
- The subject site is also located in the vicinity of the listed heritage items *"Walsworth"* (I123) at 25 Doncaster Avenue and *"T'olle Goes"* (I112) located at 2-4 Carlton Street.
- Other listed heritage items in the wider locality are physically and visually separated from the subject site by distance, intervening development and roadways and, therefore, will not be adversely affected by the proposal.
- The proposal is for the redevelopment of the site into a student accommodation complex involving the demolition of existing structures located at 4-8 and 14-16 Doncaster Avenue, retention and adaptation of the heritage item located at 10-12 Doncaster Avenue and construction of a new three-storey building across the site.
- The proposed demolition of 4-8 Doncaster Avenue is acceptable given its limited contribution to the *Racecourse Precinct Heritage Conservation Area*, coupled with its extent of physical deterioration, the considerable repair and conservation costs, stormwater pipe upgrade and flooding.
- The proposed demolition of 14-16 Doncaster Avenue is considered acceptable as the dwellings have no historical associations with the development of the racecourse and do not contribute positively to the aesthetic values of the streetscape.
- The significance of the heritage item located at 10-12 Doncaster Avenue, and its ability to contribute to the *Racecourse Precinct Heritage Conservation Area*, will be retained.
- The scale, form and materiality of the proposed rear addition to 10-12 Doncaster Avenue will be both sympathetic and clearly legible as a later structure.
- New bathroom and kitchen services to the heritage-listed terraces at 10-12 Doncaster Avenue will be limited to the new rear addition and to the front upper level rooms to ensure that the integrity of the volume of the rooms and significant features evident in the front portion of the heritage listed terraces are retained.
- The design of the proposed new building, in terms of scale, siting, bulk and form is respectful of the surrounding heritage items and the character of the *Racecourse Precinct Heritage Conservation Area*.
- The proposal will not obstruct any significant identified views within the *Racecourse Precinct Heritage Conservation Area*, or between the site and the heritage items at 25 Doncaster Street and 2-5 Carlton Street.
- The extent to which the heritage items at 25 Doncaster Street and 2-5 Carlton Street are appreciable by the public will be retained.
- The proposed development is consistent with the heritage requirements and guidelines of the *Randwick LEP 2012*.

8.2 RECOMMENDATIONS

- Subject to the recommended mitigation measures outlined in Section 7.5 of this report, GBA Heritage has no hesitation in recommending this application for approval.

9.0

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State Library of NSW - Manuscripts, Oral History & Pictures Catalogue, www.acmssearch.sl.nsw.gov.au

APPENDIX 1

Mott MacDonald Australia, *4 Doncaster Avenue, Randwick: Structural Inspection*, 01 October 2014

Our ref 303271/SS22
T 02 9439 2633
E Simon.Wiltshier@mottmac.com.au

Mott MacDonald

Oliver Johnstone
Built Pty Ltd

E: OliverJohnstone@built.com.au

01 October 2014

Dear Sir

Re: 4 Doncaster Avenue, Randwick
Structural Inspection

1.0 DETAILS OF INSPECTION

1.1 Date of inspection:	25th September 2014
1.2 Inspected by:	Simon Wiltshier, structural engineer and director of Mott MacDonald Australia
1.3 Method of inspection:	A visual inspection was carried out internally and externally. No subfloor access was found and consequently floor condition was assessed by deflection and feel underfoot. No excavations or geotechnical investigation was carried out.
1.4 Purpose:	To assess structural condition of the building
1.5 Orientation:	For the purposes of this report the façade facing Doncaster Avenue is regarded as being west. This is not a true compass bearing.
1.6 Reference Document:	Sydney Water Plan Lachlan Swamps Channel 59 and 59F Deviation 4-12 Doncaster Avenue Kensington (Attached in Appendix B)

2.0 GENERAL DESCRIPTION BUILDING AND SITE

The site is a large level block on the eastern side of Doncaster Avenue.

There are eucalypts and silky oaks of moderate size growing along the western boundary and there are trees on the northern boundary. It is considered unlikely that trees are having a significant impact on the building.

There are small shrubs growing against the south side of the building. The remainder of the site is either bare sand or grassed.

Sand is evident at the surface across the whole site and it is expected that the building is founded on sand.

The building is a large single storey house constructed in cavity brick with a timber framed tiled roof.

The exterior has a rough cast render finish.

Floors are all carpeted but appear to be predominantly suspended timber with the exception of some areas of concrete slab.

To the east there is a large non-original extension with a tiled concrete slab floor and cavity brick walls.

To the north there is a large non-original covered verandah with a concrete slab floor and metal clad bullnose roof on timber framing.

Termite baiting stations are apparent in some locations at the building perimeter.

The brick wall at the boundary to Doncaster Avenue has a variable but substantial inward rotation.

The Sydney Water Plan shows that the building runs over the top of Lachlan Swamps Channel No. 59 which is a 1650 mm diameter stormwater pipe.

3.0 CONDITION

The building has some substantial structural issues, and in particular associated with major settlement movement in the north wing.

There are additional localised areas of movement which appear to be settlement related.

There is substantial localised termite damage and it is expected that this may be more widespread, however is disguised by floor finishes. The main issues are as follows:

- The projecting north wing (currently a bedroom) has rotated and settled away from the building leaving a large crack running up the east wall through the ceiling and down the west wall. The crack width varies from 10mm in the west wall to 30mm in the east wall.

- The non-original eastern extension has rotated to the east leaving a crack of around 5mm at the junction with the original building.

- There is an outward movement in the north wall towards the rear of the building resulting in a 3mm crack adjacent to the door to the rear bedroom. There is a similar crack in what was the old eastern external wall (prior to the eastern extension) where an original window has been infilled.

- The south-eastern corner of the building has rotated and settled slightly.

- The roofs over the entry and above the south gable have lost tiles and are leaking. This leakage has led to extensive timber decay in the roof structure in this area.

- The non-original verandah slab has settled unevenly and is missing tiles in one area.

- The roof structure for this verandah appears to have inadequate inner end rafter support and opening-up of the spliced joints in the rafters where they are shaped to form the bullnose.

- The north wall to the projecting north wing has irregular diagonal cracking at the corners. This tends to indicate a twist in this northern wing as well as a tilt and is consistent with the crack width on the eastern wall being less than the western wall.

- Within the northern wing there is a large beam in the ceiling running east/west. It is at this point that the tilting manifests itself with large cornice cracks each side of the beam. These cracks may have affected support to the ceiling joists.

- In this same room there is ceiling separation from the east wall in the order of 2mm wide. This seems to indicate that the stress in the ceiling caused by the tilting of the north wing extends beyond the cross beam mentioned above.

- There is an area of flooring beneath the carpet in the northern wing that feels unsound underfoot. Termites have been very active in the joinery in the western wall of the northern

wing, consequently there is a strong potential for termite damage in this floor. The presence of carpet throughout has not allowed floor inspection, however termite damage is likely.

- The inward rotation of the boundary wall to Doncaster Avenue is likely to indicate an inadequacy in founding material although may relate to tree roots.

4.0 DISCUSSION

The movement in the north wing is quite severe.

The entire external surface of the building is coated in a rough cast render which shows signs of patching at previous cracking, so it is likely that there has been historical movement in this building in addition to that which is currently evident.

The cause of differential settlement is not clear. It could relate to subsurface moisture movement, as a result of damaged stormwater pipes or the infill of old watercourses when the building was originally constructed which have caused consolidation of loose sands or scour of sand.

There is a strong likelihood that the settlement relates to the presence of the major stormwater line under the house. This may relate to damage to this pipe, leakage from this pipe, consolidation of backfill around the pipe or due to subsurface water flow external to the pipe either in a pre-existing drainage channel or in the disturbed ground around the pipe.

It could also relate to irregularities in sand density with uneven consolidation as a result of load, vibration or water movement.

There is also the potential for compressible layers of peat or clay within the overall sand matrix.

The amount of movement is such that, if the building is retained, underpinning and potentially pipe bridging would be required to provide a reasonable level of security against ongoing movement.

Partial underpinning could be considered, however this can be problematic with the underpinned and non-underpinned areas having the potential for differential long term stability.

Remedial works design, such as underpinning would require extensive geotechnical investigation. If a pipe bridge is required this would be major work and probably well outside reasonable expectation for a domestic residence.

Roof damage due to water ingress also requires repair. The full extent would need to be determined by a carpenter with physical testing of the timber.

Termite damage is likely to be more widespread than is readily apparent.

5.0 CONCLUSION

The extent of structural damage associated with differential settlement is significant and is likely to require substantial stabilisation by underpinning, pipe bridging, or other foundation stabilisation methods.

The alternative is to demolish the north wing and the extent of damage is sufficient to warrant consideration of this.

In addition the presence of a stormwater line potentially puts at risk the rest of the building.

To more fully assess structural condition it would be necessary to remove the carpets and make subfloor access to assess floor condition. It is expected that termite damage will be found.

Roof damage appears to be localised to the south-west area of the roof although some damage is likely over the northern wing where the roof will have flexed with the tilt of this wing.

It is also likely that termite damage will have extended into the roof.

We trust that this report is of assistance, please contact the undersigned if you require further input or clarification.

Yours faithfully

Mott MacDonald Australia
SIMON A. WILTSHIER
DIVISIONAL DIRECTOR/STRUCTURES
BE(HONS), FIEAUST, MICE, CPENG, NPER

Attch: Appendix A – Photographs
Appendix B – Sydney Water Plan

APPENDIX A - PHOTOGRAPHS

View of the building from the north. The north wing, which has rotated is on the right of the picture.

Cracking in west wall of north wing. Note also termite damage in joinery

East wall of north wing showing ceiling separation at beam and severe cracking in wall

Damp penetration near entry

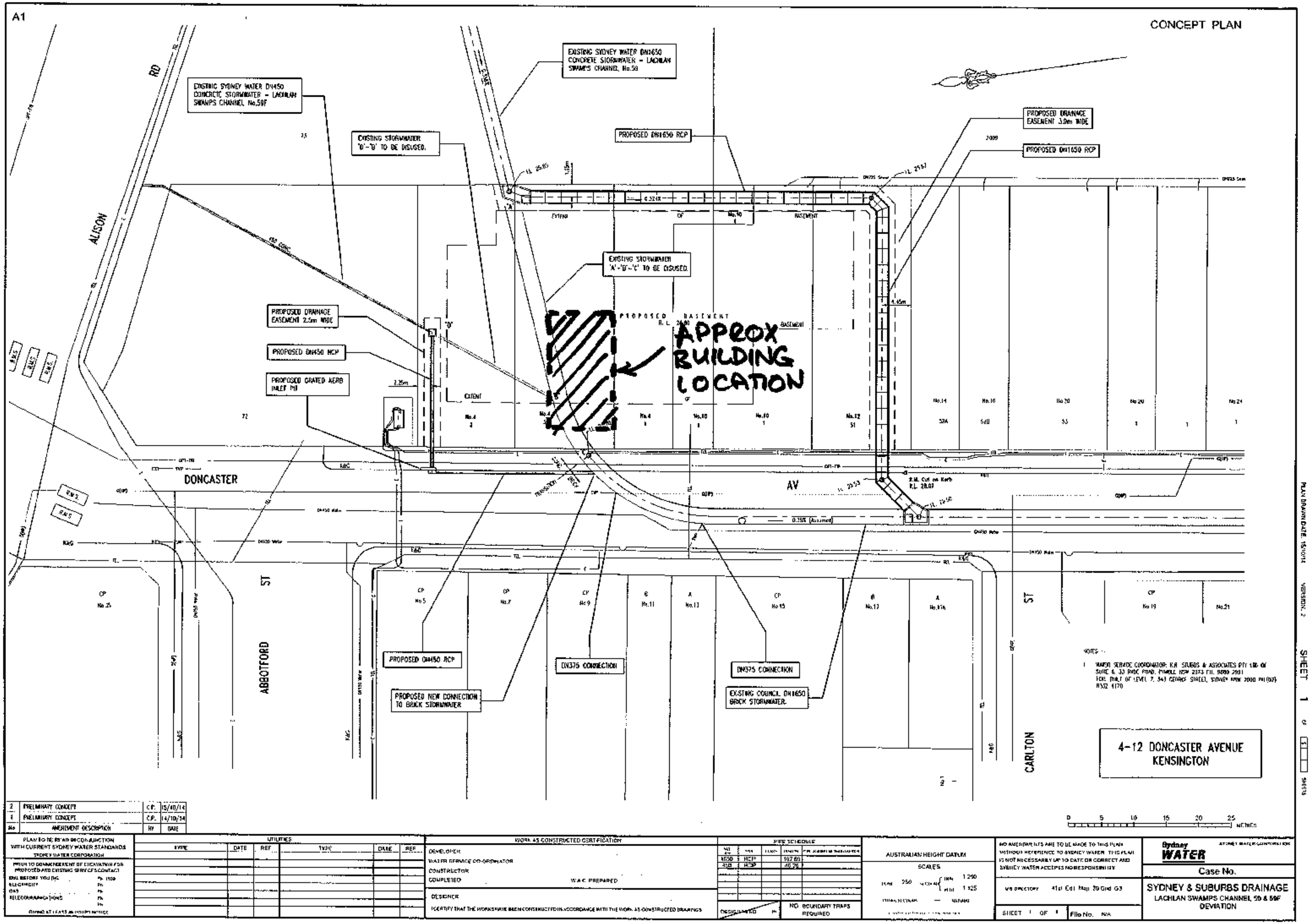
East wall of north wing – external view

Eaves decay near entry

Roof and ceiling decay over entry

The non-original eastward extension

Rotating boundary wall


A1
CONCEPT PLAN
EXISTING SYDNEY WATER DN1650 CONCRETE STORMWATER - LACHLAN SWAMPS CHANNEL No.59
EXISTING SYDNEY WATER DN450 CONCRETE STORMWATER - LACHLAN SWAMPS CHANNEL No.59F
EXISTING STORMWATER 'D'-'B' TO BE DISUSED.
PROPOSED DN1650 RCP
PROPOSED DRAINAGE EASEMENT 3.0m WIDE
PROPOSED DN1650 RCP
EXISTING STORMWATER 'A'-'B'-'C' TO BE DISUSED.
PROPOSED DRAINAGE EASEMENT 2.5m WIDE
PROPOSED DN450 RCP
PROPOSED GRATED KERB INLET PIT
PROPOSED BASEMENT
APPROX BUILDING LOCATION
ALISON RD
DONCASTER AV
ABBOTFORD ST
CARLTON ST
PROPOSED DN450 RCP
DN375 CONNECTION
DN375 CONNECTION
PROPOSED NEW CONNECTION TO BRICK STORMWATER
EXISTING COUNCIL DN1650 BRICK STORMWATER.
NOTES :-
4-12 DONCASTER AVENUE KENSINGTON
2 PRELIMINARY CONCEPT C.P. 15/10/14
1 PRELIMINARY CONCEPT C.P. 14/10/14
No. AMENDMENT DESCRIPTION BY DATE
UTILITIES
WORK AS CONSTRUCTED CERTIFICATION
PIPE SCHEDULE
AUSTRALIAN HEIGHT DATUM
SCALES
NO BOUNDARY TRAPS REQUIRED
Sydney WATER
Case No.
SYDNEY & SUBURBS DRAINAGE
LACHLAN SWAMPS CHANNEL 59 & 59F DEVIATION
SHEET 1 OF 1
File No. N/A
PLAN DRAWN DATE 15/10/14
VERSION 2
SHEET 1 OF 1 SHEETS

APPENDIX 2

WT Partnership, *Randwick Property Development Pty Ltd v Randwick City Council: Quantum Expert Report of J Osenton*, April 2015.

Case No 10009 of 2015

LAND AND ENVIRONMENT COURT OF NEW SOUTH WALES

BETWEEN

RANDWICK PROPERTY DEVELOPMENT PTY LTD Plaintiff

-and-

RANDWICK CITY COUNCIL Defendant

REPORT OF

JAMES OSENTON

Specialist Field: Quantum Expert

WT Partnership
Unit 4, 17 Napier Close
Deakin
ACT 2600

INDEX

SECTION 1 - INTRODUCTION

1. I, James Osenton, am an Associate of the Australian Institute of Quantity Surveyors, a National Director in WT Partnership, Unit 4, 17 Napier Close, Deakin, ACT 2600 and an industry practitioner of over 20 years' experience, 17 of which have been in Australia.

2. My specialist field is that of Quantum Expert relating to monies properly due under the terms of building and engineering contracts.

3. Appendix 1 contains details of my experience, qualifications and specialist field.

4. I have been retained by Randwick Property Development Pty Ltd (RPD), to provide my expert opinion regarding the following issues pertinent to the dispute between the Parties.

5. RPD has brought proceedings against Randwick City Council in relation to a development application for the demolition and construction works at Nos 4-12 Doncaster Avenue, Kensington, Sydney, NSW.

6. The matter is now the subject of the Land and Environment Court of New South Wales proceedings.

7. I have prepared a report in relation to the Premises setting out an independent estimate of the costs associated with rectification works that may be required to be undertaken at the Premises as identified in the consultant's reports provided to me.

8. I have prepared this report and have made all enquiries which I believe are desirable and appropriate. No matters of significance which I regard as relevant have to my knowledge been withheld from the Court in making this statement.

9. This report does not purport to prove facts. All references to facts are to be read as references to assumed facts. Facts have been assumed for the purpose of carrying out the analysis and reaching the conclusions contained within this report.

10. Matters in terms of liability in respect of additional scope or betterment have not been addressed by me within this report. If there has been a change in Building Codes or Standards in terms of this type of building from when it was first constructed till now, I have made no allowance for any of those costs.

11. In preparing this report I have relied upon the material provided to me. I have assumed that any rectification scopes can be designed to satisfy the Building Code of Australia.

12. In order to address this matter, I have been provided with the following information which has been provided by RPD:-
    - Council Statement of Facts and Contentions regarding the proceedings;
    - Graham Brooks & Associates Statement of Heritage Impact for 4 – 12 Doncaster Avenue, Kensington – October 2014;
    - Mott MacDonald Structural Inspection, 4 Doncaster Avenue, Randwick – 1 October 2014;
    - Dunlop Thorpe & Co – Plan of the land comprised in Certificate of Titles 51/2905, 1/1033442, 1/974821, 1/981704, 1/1094702, 2/30/5549, 3/30/5549 at Kensington in the LGA of Randwick – 7 May 2014;
    - KR Stubbs & Associates Pty Ltd Report on Building over Sydney Water Stormwater asset – 16 April 2015;
    - Sydney Water drawing - Sydney & Suburbs Drainage – Lachlan Swamps Channel 59 & 59F deviation, Preliminary Concept Rev 2 – 15 October 2014;

13. This report has been prepared from the information provided to me at the date of this report. I reserve the right to amend the report and/or opinion expressed herein based on any additional clarification or information that may be received and / or made available.

SECTION 2 – TECHNICAL INVESTIGATION

14. I have based my measurement and costings for the rectification works using conventional quantity surveying cost planning measurement techniques which have been used with the principal reference documents those listed in paragraph 12 above.

15. Due to the lack of detailed information relating to the methodology and scope of rectification works required, I have made a number of assumptions which are listed in the cost estimates included in Appendices 2 to 4 and in paragraphs 18 to 35.

16. The Works have been measured and compiled in predominately a work item format with each item having descriptions explaining the perceived works making up the respective components.

17. In certain circumstances, due to the nature of certain elements of the Works, the quantification and description has been framed as a single consolidated item which includes the estimated labour/ plant/ material components.

Methodology & Basis for Pricing

18. The rates and prices for works that are associated with rectification works are always greater than for that of new works. This report has been prepared on this basis.

19. I have based my assessment of costings predominately on the use of lump sum costs based on Rawlinsons Australian Construction Handbook 2015 (Rawlinsons) labour, plant and material charges. In my experience, using a lump sum approach to costing is the usual practice for quantity surveyors. The use of hourly and unit rates has also been used where a lump sum rate is not included for in Rawlinsons.

20. I have used rates from Rawlinsons and referenced them where applicable within the estimates contained in Appendix 2 and 4. Where rates are available, I have based my pricing on my experience as a quantity surveyor for 20 years.

21. In my opinion it is necessary to add a contingency for the contract risks. The risks include:
    - The scope of rectification works has not and cannot be fully identified;
    - There will be a number of unforeseen items that will be discovered on opening up the works;
    - Latent conditions.

    Acknowledging the general nature of the scope definition in respect of the rectification works, an amount of 25% has been added in respect of Contingency.

22. The estimate includes preliminaries for the contractor. The works will need to be managed and coordinated by a suitably qualified contractor who will be responsible for managing the works, establishment of site and site cleaning, any statutory requirements, site security, site access, letting of trades, selection of subcontractors, insurances required for the works, contract administration including progress claim preparation.

23. These allowances have been calculated based on the type of works being undertaken and construction period assumed for the works. A breakdown of these costs is included in Appendix 3.

24. The rates obtained from Rawlinsons that have been used in preparation of my estimate have a contractor's margin embedded in the rates for contractor's margin. Page 174 of Rawlinsons states that detailed prices has an allowance for Builder's head office overheads and profit as follows:
    - Preliminaries, transportation systems and base material prices – 0%
    - Electrical and mechanical services – 2.5%
    - All other trades and services – 5%.

    Due to the nature of the work, I consider the percentages allowed by Rawlinsons to be reasonable. As preliminaries has a 0% margin applied to it by Rawlinsons, I have allowed a 5% margin on my preliminaries estimate.

25. It is reasonable to assume that RPD would incur costs associated with "Professional Fees" to document the scope of works, to prepare contract documents for tendering purposes as well as a consultant to administer, supervise and co-ordinate the Works in order that the contractor will carry out the Works pursuant to the contract executed. Given that further investigations are required to understand the full extent of all the rectification works, an amount of 25% has been added to account for this expense.

26. The principal factors and general pricing assumptions used are as follows:-
    - The Works will be professionally documented in order that competitive tenders can be secured from selected contractors suitably experienced for the Works in question;
    - The Works to be consolidated into single packages and executed under an industry standard form of building contract;

27. As part of the overall planning process, it is reasonable to assume that RPD would incur costs associated with authority fees and charges to cover the cost for dealing with the relevant planning and statutory authorities. An amount of 2% has been added to cover these charges.

28. No allowance has been made for legal fees;

29. No allowance has been made for escalation. I have priced the estimates on the pricing basis of the Works as at April 2015. Accordingly, market rates and prices that I consider fair and reasonable for the scope and quality of the works and applicable as at April 2015 have been used.

30. I have assumed that there are no access restrictions. Allowances for the removal and reinstatement of personal effects have not been included.

31. The estimate summary in this report includes 10% GST.

32. General Costs and items expressly excluded from all estimates are as follows:-

- Land costs, site acquisition cost and legal fees;
- Removal of Hazardous material and any other contaminant;
- Any works in connection with archaeological and indigenous people investigations;
- Finance costs (interest and holding charges);
- Traffic management and control outside close proximity of the site;
- Long Service Leave Levy;
- Construction management or cost plus (ie the works are to be carried out by a single contractor under a lump sum contract).

33. I have not met with any other Quantum Expert.

34. Nothing has been brought to my attention that would suggest the presence of dangerous or contaminated ground conditions or deleterious materials. Hence no allowance has been made for any additional costs that might be incurred in the event that such conditions were encountered and all rates for disposal have assumed normal tip fee rates would apply.

35. Similarly I have been given no indication that there is any specific problem with either surface or ground water on the site that might affect construction. Hence no allowance has been made for any dewatering or extraordinary temporary support measures.

SECTION 3 - OPINION

36. It is in my opinion that the estimated costs which I believe are reasonable and appropriate for carrying out the rectification works to the Premises is **$1,224,267.25** including GST. Detailed breakdowns of these estimates are enclosed at Appendices 2 to 3.

37. Appendix 4 contains the estimated costs for 2 options for the proposed works associated with the existing stormwater pipe currently underneath the Premises as described in the KR Stubbs & Associates report on building over a Sydney Water Stormwater asset dated 16 April 2015.

38. My cost estimate for the diversion of the existing stormwater pipe is **$931,774.09** including GST.

39. My cost estimate for the replacement of the stormwater pipe including demolition and reinstatement of the house at 4-12 Doncaster Avenue is **$863,145.87** including GST.

Notes

40. It is commonly accepted that an estimate by a quantity surveyor should not be expected to represent the actual cost that will be or was incurred; rather it is indicative of the probable cost.

SECTION 4 - DECLERATION

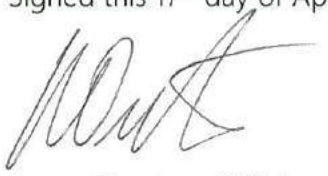
41. I declare that:

42. I believe in the accuracy and truth of the matter put forward;

43. This Report includes all facts which I regard as being relevant to the Opinion which I have expressed and that I have drawn to the attention of the Court any matter which would affect the validity of that Opinion;

44. I have made all the inquiries which I believe are desirable and appropriate and that no matters of significance which I regard as relevant have, to my knowledge, been withheld from the Court.

Signed this 17th day of April 2015



James Osenton AAIQS

APPENDIX 1
JAMES OSENTON – CURRICULA VITAE

JAMES OSENTON
DIRECTOR

PERSONAL DETAILS

Professional Experience	23 Years
Countries worked	Australia and United Kingdom
Qualifications & Affiliations	Bachelor of Science (Quantity Surveying) Degree with Honours – University of the West of England, Bristol, UK. Associate of the Australian Institute of Quantity Surveyors

Professional Experience

Over the last twenty two years, James has gained an industry wide reputation for the successful delivery of construction cost management services in a number of market sectors and on a variety of major projects.

In October 2010, James moved to manage the Canberra office where he is responsible for business development, client liaison and management on a wide and diverse range of services with particular emphasis on feasibility analysis, project procurement, cost planning, value engineering, contract documentation, contractual claims and Principal Consultant services.

In March 2002 James joined WT Partnership as a Senior Quantity Surveyor and has been involved in cost planning of various mixed commercial/retail and residential developments as well as post contract cost control, contract administration and final account settlement on behalf of the clients for their various building projects. He has also developed specialist skills in dispute resolution and providing 'expert' opinion in litigation matters.

In 1997, James moved to Australia and was employed as a Senior Quantity Surveyor by DG Jones and Partners Pty Ltd (Sydney). James was involved in all aspects of pre and post contract duties.

MAJOR PROJECTS

Construction costs for Downer Club & Planetarium, Canberra;

Lagani Apartments, Canberra – Rectification of defective works;

28-42 Rider Boulevard, Rhodes, Sydney – Rectification of defective works;

23, 29 & 35 King Street Wharf, Sydney – Rectification of defective works to 3 no apartment blocks;

Kendall Inlet, Cabarita - Defective windows & doors to 32 apartments & 8 townhouses;

Chelsea Apartments, Sydney - Defective windows / doors / render to facade to 22 story hotel / serviced apartments / apartment tower;

Zenix Apartments, Sydney - Rectification of defective works to 4 no apartment tower blocks;

Cost to house for changes & alterations dispute – ACT residence;

Cost to complete dispute - Bonner residence;

Cost to amend / upgrade – Queanbeyan townhouses.

APPENDIX 2
ESTIMATE REPORT - RECTIFICATION COSTS

RANDWICK PROPERTY DEVELOPMENT PTY LTD v RANDWICK CITY COUNCIL

APPENDIX 2 - ESTIMATE REPORT - RECTIFICATION COSTS

Revision: 0
Date: 17/04/2015

Area	Description of Work		Qty	Unit	Rate	Item total	Total	Comments	Rawlinson's 2015 page
Complete House		Assumption - All perimeter walls have "strip type footings" underneath them not exceeding 1m deep.						Price based on work being carried out in lengths not exceeding 1200mm	
	Underpinning of all footings - External walls	Underpinning existing 600mm wide footing in mass concrete including preliminary excavation not exceeding 1000mm deep, depth below underside of existing footing not exceeding 1000mm.	56.00	m	$ 1,395.00	$ 78,120.00		Excludes length for bridging over existing stormwater pipe	114
	Underpinning of all footings - Internal walls	Underpinning existing 600mm wide footing in mass concrete including preliminary excavation not exceeding 1000mm deep, depth below underside of existing footing not exceeding 1000mm.	83.00	m	$ 1,395.00	$ 115,785.00			114
						$ 193,905.00	$ 193,905.00		
Internal floors	Replacement of all timber floors including bearers and joists due to rot and termites	Remove existing floor coverings - Carpet	206.00	m2	$ 3.20	$ 659.20			207
		Remove existing floor coverings - Vinyl	11.00	m2	$ 9.35	$ 102.85			207
		Remove existing floor coverings - Tiling	23.00	m2	$ 19.85	$ 456.55			207
		Remove existing skirtings	100.00	m	$ 10.00	$ 1,000.00			
		Remove existing floor boards	240.00	m2	$ 9.65	$ 2,316.00			207
		Allowance to remove bearers & joists	120.00	hrs	$ 85.00	$ 10,200.00		Based on 0.5 hr per m2 for a carpenter	696
		Skip for disposal of material	1.00	Item	$ 500.00	$ 500.00			
		New bearers & joists	240.00	m2	$ 82.80	$ 19,872.00			328
		25mm tongued & grooved flooring in 100mm widths fixed to timber; radiata pine	240.00	m2	$ 63.80	$ 15,312.00			335
		Moulded skirting fixed to timber, 150 x 25mm	166.00	m	$ 27.50	$ 4,565.00			348
						$ 54,983.60	$ 54,983.60		
External floors - Porch / Verandah	Replacement of all timber floors including bearers and joist due to rot and termites	Remove existing floor boards	49.00	m2	$ 9.65	$ 472.85			207
		Allowance to remove bearers & joists	24.50	hrs	$ 85.00	$ 2,082.50		Based on 0.5 hr per m2 for a carpenter	696
		Skip for disposal of material	1.00	Item	$ 500.00	$ 500.00			
		New bearers & joists	49.00	m2	$ 82.80	$ 4,057.20			328
		25mm timber decking; treated pine	49.00	m2	$ 82.20	$ 4,027.80			336
						$ 11,140.35	$ 11,140.35		

RANDWICK PROPERTY DEVELOPMENT PTY LTD v RANDWICK CITY COUNCIL

APPENDIX 2 - ESTIMATE REPORT - RECTIFICATION COSTS

Revision: 0
Date: 17/04/2015

Area	Description of Work		Qty	Unit	Rate	Item total	Total	Comments	Rawlinson's 2015 page
Roof	Replacement of roof structure and roof coverings	Strip roof covering to sloping roof; tiles	270.00	m2	$ 8.40	$ 2,268.00			206
		Allowance to remove roof framing, eaves linings, gutters and downpipes	270.00	hrs	$ 75.00	$ 20,250.00		Based on 2 labourers 0.5hr per m2	696
		Skip for disposal of material	2.00	Item	$ 500.00	$ 1,000.00			
		Timber framed roof comprising trusses, rafters, ceiling joists, etc., insulation batts on mesh, standard fascia and finishing with swiss pattern terracotta tiles	270.00	m2	$ 208.00	$ 56,160.00			124
		Allowance for skylights	6.00	No	$ 1,000.00	$ 6,000.00			
		Allowance for roof plumbing	270.00	m2	$ 39.60	$ 10,692.00			125
						$ 96,370.00	$ 96,370.00		
Roof - Verandah only	Replacement of roof structure and roof coverings	Strip roof covering to sloping roof; metal cladding	45.00	m2	$ 10.05	$ 452.25			206
		Allowance to remove roof framing, gutters and downpipes	45.00	hrs	$ 75.00	$ 3,375.00		Based on 2 labourers 0.5hr per m2	696
		Skip for disposal of material	1.00	Item	$ 500.00	$ 500.00			
		Timber roof framing and rafters together with gutters and downpipes with steel ribbed decking	45.00	m2	$ 232.00	$ 10,440.00			126
						$ 14,767.25	$ 14,767.25		
External Walls	Patch/ repair and making good finishes	Repairs to external walls - (Allowance based on 50% of external wall area)	95.00	m2	$ 100.00	$ 9,500.00		Rate allows for removal of broken timber boarding / stucco finish	
		Remove loose / flaky paint, prepare to receive new	47.50	hrs	$ 75.00	$ 3,562.50		Based on 0.25hrs per m2	696
		Repaint external walls, primer, one sealer undercoat and two coats semi gloss acrylic	190.00	m2	$ 18.95	$ 3,600.50			439 + 442
						$ 16,663.00	$ 16,663.00		
Internal Walls	Patch/ repair and making good finishes	Repairs to internal face of external walls - (Allowance based on 50% of wall area)	95.00	m2	$ 50.00	$ 4,750.00		Rate allows for plasterboard repairs	
		Repairs to both sides of internal walls - (Allowance based on 50% of wall area)	207.50	m2	$ 150.00	$ 31,125.00		Rate allows for crack stitching / masonry & plasterboard repairs	
		Remove loose / flaky paint, prepare to receive new	99.38	hrs	$ 75.00	$ 7,453.13		Based on 0.25hrs per m2	696
		Repaint internal walls, primer, one sealer undercoat and two coats semi gloss acrylic	605.00	m2	$ 17.70	$ 10,708.50			439
						$ 54,036.63	$ 54,036.63		
Windows	Repair damaged windows	Allowance to replace broken glass	1.00	Item	$ 10,000.00	$ 10,000.00			
						$ 10,000.00	$ 10,000.00		
Chimneys	Repairs to chimneys	Allowance for repairs to existing chimneys	1.00	Item	$ 10,000.00	$ 10,000.00			
						$ 10,000.00	$ 10,000.00		

RANDWICK PROPERTY DEVELOPMENT PTY LTD v RANDWICK CITY COUNCIL

APPENDIX 2 - ESTIMATE REPORT - RECTIFICATION COSTS

Revision: 0
Date: 17/04/2015

Area	Description of Work		Qty	Unit	Rate	Item total	Total	Comments	Rawlinson's 2015 page
Bathrooms	Provision of new bathrooms / WCs due to rectification works								
		Labour remove shower fittings, hack off wall tiles	50.00	Hrs	$ 55.00	$ 2,750.00		Based on wall tile removal of 1hr per 2m2. (Approx area of wall tiling = 88m2) + 6 hrs for removal of fittings	696
		Plumber to remove sanitary fixtures	16.00	hrs	$ 95.00	$ 1,520.00		Based on 2hrs per fitting	696
		Tiling, 200 x 200 white glazed (PC $40.00/m2 supplied.) + two coats of bituminous paint / waterproof membrane underneath	23.00	m2	$ 129.75	$ 2,984.25			426 + 219
		WC	3.00	No	$ 2,770.00	$ 8,310.00		The following are composite prices for fixtures and tapware with typical cold water and drainage pipework run to a major riser or the outside of the building	163
		Wash hand basin	3.00	No	$ 1,650.00	$ 4,950.00		The following are composite prices for fixtures and tapware with typical cold water and drainage pipework run to a major riser or the outside of the building	163
		Shower	2.00	No	$ 540.00	$ 1,080.00			
		Bath	2.00	No	$ 2,280.00	$ 4,560.00		The following are composite prices for fixtures and tapware with typical cold water and drainage pipework run to a major riser or the outside of the building	163
		Allowance for metalwork items - toilet roll holders / towel rails / soap dish	3.00	No	$ 300.00	$ 900.00			
		Allowance for mirrors	3.00	No	$ 500.00	$ 1,500.00			
		Allowance for shower screen	2.00	No	$ 1,200.00	$ 2,400.00			
						$ 30,954.25	$ 30,954.25		
Kitchen	Provision of new kitchen due to rectification works								
		Labour to remove joinery	50.00	Hrs	$ 55.00	$ 2,750.00			696
		Plumber to remove sanitary fixtures	2.00	hrs	$ 95.00	$ 190.00		Based on 2hrs per fitting	696
		Electricain to remove kitchen appliances	6.00	Hrs	$ 97.00	$ 582.00		Based on 2hrs per fitting	696
		Vinyl sheet flooring, 2.0mm thick (Accolade Plus PC $38/m2 supplied)	11.00	m2	$ 67.50	$ 742.50			430
		100mm high vinyl skirting	14.00	m	$ 12.30	$ 172.20			432
		Allowance for kitchen joinery comprising cupbards, benchtop, overhead cupboards	1.00	No	$ 10,000.00	$ 10,000.00			
		Sink	1.00	No	$ 2,130.00	$ 2,130.00		The following are composite prices for fixtures and tapware with typical cold water and drainage pipework run to a major riser or the outside of the building	163
		Oven	1.00	No	$ 1,380.00	$ 1,380.00			650
		Cooktop	1.00	No	$ 1,380.00	$ 1,380.00			651
		Rangehood	1.00	No	$ 1,500.00	$ 1,500.00			
						$ 20,826.70	$ 20,826.70		

RANDWICK PROPERTY DEVELOPMENT PTY LTD v RANDWICK CITY COUNCIL

APPENDIX 2 - ESTIMATE REPORT - RECTIFICATION COSTS

Revision: 0
Date: 17/04/2015

Area	Description of Work		Qty	Unit	Rate	Item total	Total	Comments	Rawlinson's 2015 page
New Ceilings	Provision of new ceilings due to rectification works	Take down timber framed and sheet lined ceiling	240.00	m2	$ 12.40	$ 2,976.00			207
		10mm thick plasterboard, flush finished, fixed to timber ceiling framing	240.00	m2	$ 28.00	$ 6,720.00			415
		Paint to ceilings, primer, one sealer undercoat and two coats semi gloss acrylic	240.00	m2	$ 17.70	$ 4,248.00			439
		Allowance to replace picture rails	166.00	m	$ 15.00	$ 2,490.00			
		Allowance to replace fanlights above internal doors	1.00	Item	$ 5,000.00	$ 5,000.00			
		Replacement of lights - circuits and fittings	240.00	m2	$ 24.75	$ 5,940.00			167
						$ 27,374.00	$ 27,374.00		
New Flooring	Provision of new floor finsihes due to rectification works	Wool tufted carpet (PC $30/m2 supplied) on and including foam underlay	206.00	m2	$ 65.70	$ 13,534.20			428
		Vinyl - Included in kitchen works	11.00	m2	$ -	Inc			
		Tiling - Included in bathroom works	23.00	m2	$ -	Inc			
						$ 13,534.20	$ 13,534.20		
Landscaping	Making good landscaping due to rectification works Inward rotation of boundary wall to Doncaster Avenue.	Allowance	1.00	Item	$ 5,000.00	$ 5,000.00			
		Demolish brickwork boundary wall - 40m length	60.00	m2	$ 35.60	$ 2,136.00			206
		Excavation by hand to expose wall foundation - 40 m long x 0.75 m deep x 0.75m wide	22.50	m3	$ 198.50	$ 4,466.25			213
		Demolish existing foundation - 40 m long x 0.5m wide	20.00	m2	$ 46.10	$ 922.00		Cut away rate for 100 thick unreinforced concrete ground slab	206
		25 Mpa concrete in strip footing including reinforcement (20 kg/cum), formwork	10.00	m3	$ 565.00	$ 5,650.00			113
		Backfilling with excavated material	12.50	m3	$ 65.00	$ 812.50			
		Wall comprising clay common bricks, 110 thick including fair face and clean down both sides	60.00	m2	$ 119.00	$ 7,140.00			131
		Seal and two coats acrylic paint to wall; both sides	120.00	m2	$ 12.10	$ 1,452.00			131
						$ 27,578.75	$ 27,578.75		
						Subtotal	$ 582,133.73		
Contingency		Contract & Construction Contingency	25.00	%	$ 582,133.73	$ 145,533.43	$ 145,533.43		
Contractors Preliminaries	See separate Break up		1.00	Item	$ 188,832.94	$ 188,832.94	$ 188,832.94		
Professional Fees		Fees for investigations / rectification scopes & methodology / contract works administration for Client	25.00	%	$ 727,667.16	$ 181,916.79	$ 181,916.79		
Authority Fees and Charges			2.00	%	$ 727,667.16	$ 14,553.34	$ 14,553.34		
						TOTAL (Excl GST)	$ 1,112,970.23		
GST			10.00	%	$ 1,112,970.23	$ 111,297.02	$ 111,297.02		
						TOTAL (Incl GST)	$ 1,224,267.25		

APPENDIX 3
ESTIMATE REPORT – PRELIMINARIES COST

RANDWICK PROPERTY DEVELOPMENT PTY LTD v RANDWICK CITY COUNCIL

APPENDIX 3 - ESTIMATE REPORT - PRELIMINARIES COSTS

The Construction Period is based on 20 working weeks

Revision: 0

Date: 17/04/2015

		Qty	Unit	Rate	Item total	Total	Comments
Staff and Labour	Project/Site manager - ($85/hr x 40 hrs/wk)	7.00	Weeks	$ 3,400.00	$ 23,800.00		25% of time applicable to this project + 2 weeks mobilisation.
	Contract Administrator - ($65/hr x 10 hrs/wk)	5.00	Weeks	$ 2,600.00	$ 13,000.00		25% of time applicable to this project
	Foreman - ($65/hr x 40 hrs/wk)	20.00	Weeks	$ 2,600.00	$ 52,000.00		
	Labourer - General (2 days / week)	8.00	Weeks	$ 2,000.00	$ 16,000.00		40% of time applicable to this project.
					$ 104,800.00	**$ 104,800.00**	
Site Accommodation	Site shed	20.00	Weeks	$ 100.00	$ 2,000.00		
	WC portable	20.00	Weeks	$ 75.00	$ 1,500.00		
	Lunch shed	0.00	Weeks	$ 100.00	$ -		
	Delivery and pick up	2.00	No	$ 150.00	$ 300.00		
	Storage Container.	0.00	Weeks	$ 65.00	$ -		
	Float last	0.00	No	$ 300.00	$ -		
					$ 3,800.00	**$ 3,800.00**	
Site Survey	Dilapidation report	1.00	No	$ 2,000.00	$ 2,000.00		
					$ 2,000.00	**$ 2,000.00**	
Temporary Power	Mains connection	0.00	No	$ 500.00	$ -		
	Subboards	0.00	No	$ 800.00	$ -		
	Temporary lights	0.00	No	$ 250.00	$ -		
	Sheds	0.00	No	$ 500.00	$ -		
	Charges	0.00	Weeks	$ 160.00	$ -		
	Commissioning	0.00	No	$ 1,500.00	$ -		
					$ -	**$ -**	
Temporary Hydraulics	Water connection	0.00	No	$ 1,500.00	$ -		
	Sewer connection	0.00	No	$ 2,500.00	$ -		
	Water board charges	0.00	No	$ 2,000.00	$ -		
					$ -	**$ -**	

RANDWICK PROPERTY DEVELOPMENT PTY LTD v RANDWICK CITY COUNCIL

APPENDIX 3 - ESTIMATE REPORT - PRELIMINARIES COSTS
The Construction Period is based on 20 working weeks

Revision: 0
Date: 17/04/2015

		Qty	Unit		Rate		Item total	Total	Comments
Communications & Office Equipment	Computer & printer	0.00	No	$	1,500.00	$	-		
	Internet connection	0.00	No	$	50.00	$	-		
	Mobile phones	40.00	Weeks	$	40.00	$	1,600.00		For all Staff and Labour
	Petty cash	20.00	Weeks	$	100.00	$	2,000.00		
	Office supplies / Plan Printing	20.00	Weeks	$	50.00	$	1,000.00		
						$	4,600.00	$ 4,600.00	
Materials Handling / Access									
	Man & Materials Hoist								
	Rental charge	0.00	Weeks	$	2,500.00	$	-		
	Establishment & removal	0.00	No	$	5,500.00	$	-		
	Access								
	Scaffolding	1.00	Item	$	16,150.00	$	16,150.00		
	Mobile Cranes								
	Mobile Cranes	0.00	hrs	$	200.00	$	-		
	Tower Crane								
	Rental charge	0.00	Weeks	$	4,000.00	$	-		
	Establishment & removal	0.00	No	$	8,500.00	$	-		
	Vehicles								
	Utilities	20.00	Weeks	$	250.00	$	5,000.00		
	Scissor Lifts								
	Rental charge	0.00	Weeks	$	2,500.00	$	-		
						$	21,150.00	$ 21,150.00	

RANDWICK PROPERTY DEVELOPMENT PTY LTD v RANDWICK CITY COUNCIL

APPENDIX 3 - ESTIMATE REPORT - PRELIMINARIES COSTS
The Construction Period is based on 20 working weeks

Revision: 0
Date: 17/04/2015

		Qty	Unit		Rate		Item total		Total	Comments
Communications & Office Equipment	Small tool replacement	20.00	Weeks	$	50.00	$	1,000.00			
	Consumables and hardware	20.00	Weeks	$	100.00	$	2,000.00			
	Site sign boards	1.00	No	$	500.00	$	500.00			
	Lockable tool chests	1.00	No	$	1,000.00	$	1,000.00			
						$	**4,500.00**	**$**	**4,500.00**	
Safety / First Aid	Workers	10.00	No	$	300.00	$	3,000.00			
	Consultants	6.00	No	$	300.00	$	1,800.00			
	First Aid	1.00	No	$	250.00	$	250.00			
						$	**5,050.00**	**$**	**5,050.00**	
Rubbish Removal	Bins	20.00	No	$	500.00	$	10,000.00			1 bin per week
	Rubbish chutes	0.00	No	$	250.00	$	-			
						$	**10,000.00**	**$**	**10,000.00**	
Cleaning	Weekly clean	0.00	No	$	400.00	$	-			
	Final clean (internal)	240.00	m2	$	25.00	$	6,000.00			
	Clean external façade	190.00	m2	$	5.00	$	950.00			
						$	**6,950.00**	**$**	**6,950.00**	
Protection	Allowance for temporary barricades, safety signage, etc	20.00	Weeks	$	250.00	$	5,000.00			
	Security	0.00	Weeks	$	400.00	$	-			
						$	**5,000.00**	**$**	**5,000.00**	
Sundry Fees	Home Owners Warranty Insurance	0.00	Units	$	250.00	$	-			
	Workcover Authority	1.00	Item	$	3,000.00	$	3,000.00			
	MBA Fees	1.00	Item	$	2,000.00	$	2,000.00			
						$	**5,000.00**	**$**	**5,000.00**	
Insurances	Contractor's All Risk	1.00	Item	$	-		Inc			Contract Works 0.11% + Fire Services Levy 31% of Contract Works insurance + Stamp Duty 9% of sum of other two components = 0.157%. Contract Works Public Liability 0.17% + Stamp Duty 9% = 0.185%. Total Contract Works Insurances = 0.342%
	Public Liability	1.00	Item	$	-		Inc			
	Bank Guarantees	0.34	%	$	582,133.73	$	1,990.90			
	Professional Indemnity Insurance	1.00	Item	$	-		Inc			
						$	**1,990.90**	**$**	**1,990.90**	
Defects Maintenance	Defects Maintenance	1.00	Item	$	5,000.00	$	5,000.00			
						$	**5,000.00**	**$**	**5,000.00**	
						Preliminaries Total		**$**	**179,840.90**	
Add Margin @ 5% as per Rawlinsons pg 174		1.00	Item	$	8,992.04	$	8,992.04			
						$	**8,992.04**	**$**	**8,992.04**	
						Preliminaries Total including Margin		**$**	**188,832.94**	

APPENDIX 4
ESTIMATE REPORT – STORMWATER RECTIFICATION COSTS

RANDWICK PROPERTY DEVELOPMENT PTY LTD v RANDWICK CITY COUNCIL

APPENDIX 4 - ESTIMATE REPORT - STORMWATER RECTIFICATION COSTS

Revision: 0
Date: 17/04/2015

Area	Description of Work - Option 1 - Diversion of Stormwater Pipe		Qty	Unit	Rate	Item total	Total	Comments	Rawlinson's 2015 page
Diversion of existing stormwater pipe		As contained in KR Stubbs report 16 April 2015	1.00	Item	$ 545,454.00	$ 545,454.00			
	Making good landscaping due to rectification works	Allowance	1.00	Item	$ 10,000.00	$ 10,000.00			
						$ 555,454.00	$ 555,454.00		
						Subtotal	$ 555,454.00		
Contingency		Contract & Construction Contingency	25.00	%	$ 555,454.00	$ 138,863.50	$ 138,863.50		
Contractors Preliminaries			1.00	Item			Inc		
Professional Fees		Fees for investigations / rectification scopes & methodology / contract works administration for Client	20.00	%	$ 694,317.50	$ 138,863.50	$ 138,863.50		
Authority Fees and Charges			2.00	%	$ 694,317.50	$ 13,886.35	$ 13,886.35		
						TOTAL (Excl GST)	$ 847,067.35		
GST			10.00	%	$ 847,067.35	$ 84,706.74	$ 84,706.74		
						TOTAL (Incl GST)	$ 931,774.09		

RANDWICK PROPERTY DEVELOPMENT PTY LTD v RANDWICK CITY COUNCIL

APPENDIX 4 - ESTIMATE REPORT - STORMWATER RECTIFICATION COSTS

Revision: 0
Date: 17/04/2015

Area	Description of Work - Option 2 - Replacement of Stormwater Pipe		Qty	Unit	Rate	Item total	Total	Comments	Rawlinson's 2015 page
Replacement of existing stormwater pipe		As contained in KR Stubbs report 16 April 2015	1.00	Item	$ 181,818.00	$ 181,818.00			
		Demolition of part of the existing house to enable replacement of pipework	135.00	m2	$ 200.00	$ 27,000.00			
		Allowance for temporary propping to house	1.00	Item	$ 50,000.00	$ 50,000.00			
		Reconstruction of house following replacement of pipework	135.00	m2	$ 1,820.19	$ 245,725.00		Based on ground floor level house addition (135m2 x $1635 = $220,725 + 1 no bathroom fitout and services = $25,000 = $245,725	58
	Making good landscaping due to rectification works	Allowance	1.00	Item	$ 10,000.00	$ 10,000.00			
						$ 514,543.00	$ 514,543.00		
						Subtotal	$ 514,543.00		
Contingency		Contract & Construction Contingency	25.00	%	$ 514,543.00	$ 128,635.75	$ 128,635.75		
Contractors Preliminaries			1.00	Item			Inc		
Professional Fees		Fees for investigations / rectification scopes & methodology / contract works administration for Client	20.00	%	$ 643,178.75	$ 128,635.75	$ 128,635.75		
Authority Fees and Charges			2.00	%	$ 643,178.75	$ 12,863.58	$ 12,863.58		
						TOTAL (Excl GST)	$ 784,678.07		
GST			10.00	%	$ 784,678.07	$ 78,467.81	$ 78,467.81		
						TOTAL (Incl GST)	$ 863,145.87		

APPENDIX 3

K. R. Stubbs & Associated Pty Ltd, *4 Doncaster Avenue, Kensington: Report on Building over Sydney Water Stormwater Asset*, 16 April 2015.

K.R. STUBBS & ASSOCIATES PTY LTD
CONSULTING ENGINEERS PROJECT MANAGERS WATER SERVICING COORDINATORS
Mailing address: P.O. Box 1072 PYMBLE BUSINESS CENTRE NSW 2073 Office: Suite 6,No.33 RYDE ROAD PYMBLE 2073
TELEPHONE: (02) 9880 2991 FACS: (02) 9880 2994 E-MAIL: enquiry@krstubbs.com.au
A.B.N.15 001 759 584

OUR REF: WSC1972

16th April 2015

Built Development Group Pty Ltd
Level 6, 343 George Street
SYDNEY NSW 2000

Attention: Oliver Johnstone

Dear Oliver,

4 DONCASTER AVENUE, KENSINGTON
REPORT ON BUILDING OVER SYDNEY WATER STORMWATER ASSET

1.0 CURRENT SITUATION

The brick cottage at No.4 Doncaster Avenue, Kensington is located over a Sydney Water 1650mm diameter concrete stormwater pipeline known as Lachlan Swamps Channel No.59.

This stormwater pipeline was constructed in 1895.

2.0 SYDNEY WATER'S CURRENT POLICY

Building over stormwater assets interfere with Sydney Water's ability to maintain and reconstruct these assets. Accordingly, building over stormwater assets is generally not permitted.

3.0 STRUCTURAL CONDITION OF COTTAGE

The Structural Report dated 1st October 2014 prepared by Mott MacDonald Pty Ltd indicates that the cottage has some substantial structural issues particularly in the north wing (this is in the vicinity of the stormwater pipeline). This is likely to require substantial stabilisation by underpinning, pipe bridging or other foundation stabilisation methods.

4.0 DISCUSSION

Should the cottage remain, the extent of stabilisation works would require Sydney Water Building Plan Approval.

Sydney Water would consider the extent of re-development of the site and would only allow the cottage to remain over the pipeline if it is the only feasible solution to facilitate reasonable development of the site.

Sydney Water would assess the remaining life of the stormwater asset and may require deviation or re-construction of the asset where the remaining life of the asset is less than the expected life of the renovated cottage.

Further details relating to building over a Sydney Water stormwater asset can be found in the Reference Document '*Guidelines for building over or adjacent to Sydney Water stormwater assets*' – *attached in Appendix A.*

5.0 CONCLUSION

In view of the age of the stormwater pipeline (built in 1895), we would expect Sydney Water to require the pipeline to be re-constructed or deviated.

6.0 BUDGET COSTS

The following budget costs allow for construction costs, design fees and Water Servicing Coordinator fees and are inclusive of GST.

- Re-construction under cottage, say 25m $ 200,000
- Deviation around site, say 108m $ 600,000

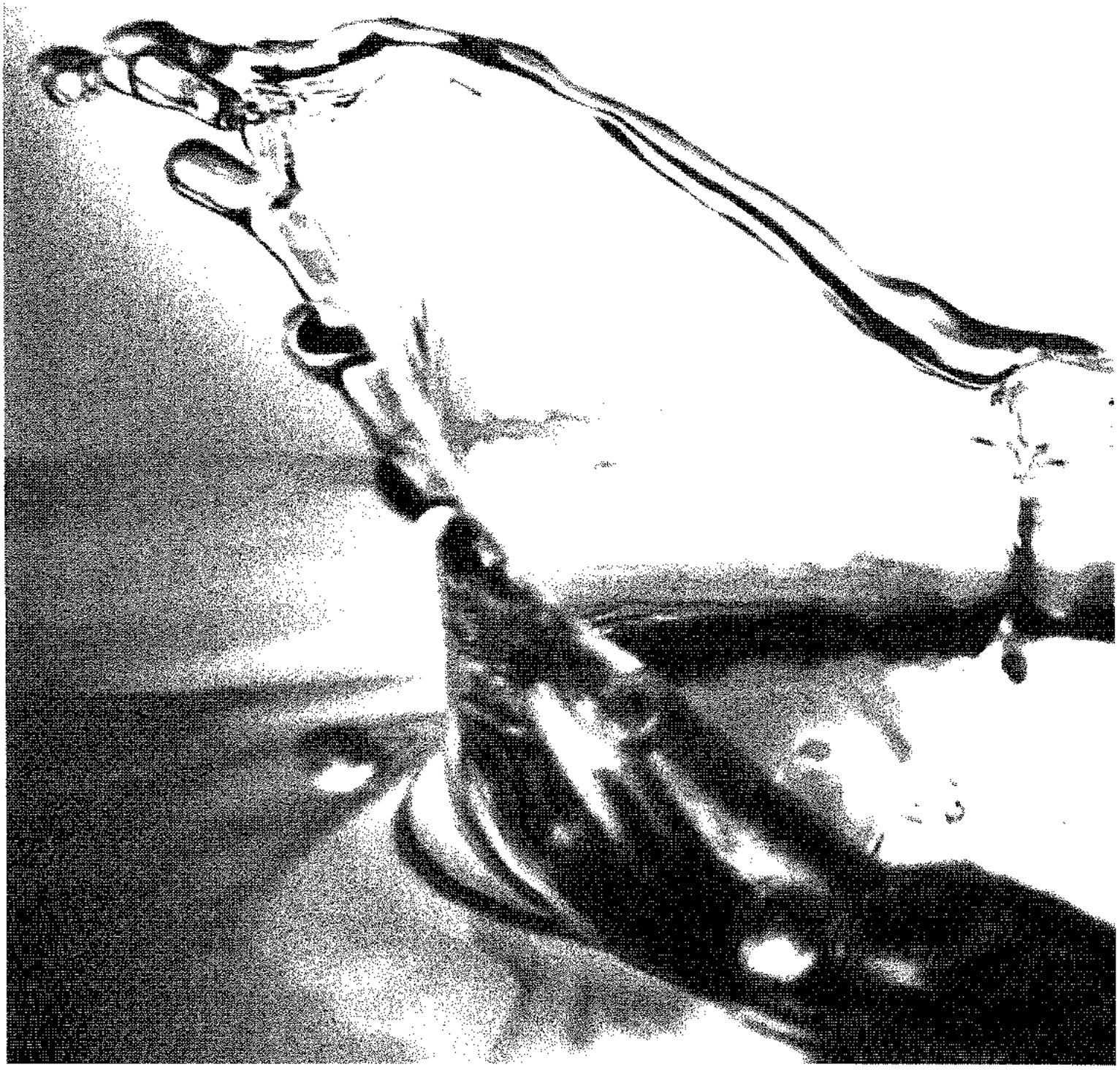
Yours faithfully

COLIN PICKERING
Chartered Professional Engineer
B.Sc(Eng)Civil, M.I.E.Aust.

Attached: Appendix A – Guidelines for building over or adjacent to Sydney Water stormwater assets.

Sydney WATER

Guidelines for building over or adjacent to Sydney Water stormwater assets



Contents

1 When to use these guidelines

These Guidelines support the implementation of Sydney Water's *Building Over or Adjacent to Sydney Water Stormwater Assets Policy*, and provide details on the requirements for building over or adjacent to Sydney Water stormwater assets.

When planning your development, you need to contact 'Dial Before You Dig' or a Quick Check agent to find out if there are any existing Sydney Water stormwater assets near your proposed building. You can also purchase a service location diagram from a Quick Check agent. Before you start building, your building plans must be approved by Sydney Water.

If a stormwater asset is located on or within 10 metres of your site, your building plans can only be approved by Sydney Water through a Water Servicing Coordinator and you must follow these Guidelines to design your building.

The Coordinator will work with Sydney Water to review your plans and assess any requirements. The Coordinator will tell you about any requirements and help you meet them.

1.1 Reports may be required

Depending on the proposal and its impacts upon the stormwater asset, the Water Servicing Coordinator can help you prepare the following reports:

- *Services Protection Report*
- *Stormwater Deviation Report*
- *Flood Impact Assessment Report*

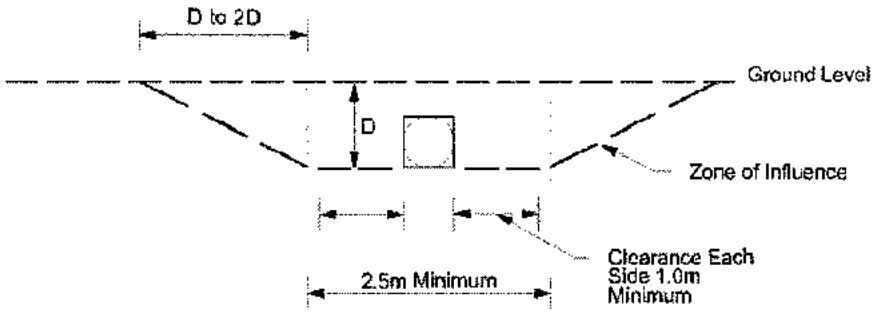
Services Protection Report

As part of the development, the asset must be accurately located to design the appropriate asset protection requirements. This information must be presented in a *Services Protection Report*.

The report will accurately locate the size, alignment and depth of all Sydney Water assets in the vicinity (i.e. water, sewer, stormwater) within the zone of influence of the existing or proposed stormwater asset. This area may include the subject property, adjoining properties and dedicated road reserve (including footpath area). Figure 1 depicts the zone of influence from Sydney Water's clearance requirements.

A condition assessment of the asset is to be included in the report. Where available, Sydney Water will provide a recent condition assessment from its scheduled inspection program.

Figure 1 – Zone of influence



Stormwater Deviation Report

Buildings over stormwater assets interfere with our ability to maintain and reconstruct these assets. In order to avoid increased public costs to maintain and reconstruct assets, Sydney Water may require the asset to be deviated around the proposed building, where it is possible to do so.

Options to deviate the asset around the proposed building must be presented in a *Stormwater Deviation Report*. This report needs to examine the feasibility of constructing a new stormwater asset, including:

- Any changes to the slope of the stormwater asset.
- Consideration of all existing services, structures, etc. that are within the deviation route.

The report is to include cost estimates for each deviation option and for the 'base case' of reconstructing the asset to its existing alignment and length.

Flood Impact Assessment Report

Floodplain risks should be managed by using the floodplain in a manner that is compatible with the flood hazard and at a level of risk that is accepted by the community. The control and management of land use provides the most effective means of managing the consequences of floods and minimising flood risks. This approach to managing flood risk is in line with the NSW Government's Flood Policy as described in the Floodplain Development Manual.

Sydney Water will require the submission of a *Flood Impact Assessment Report* in support of applications to build over or adjacent to a stormwater asset. Refer to Appendix 1 for further details.

2 Building Over Stormwater Assets

Sydney Water will consider proposals to locate building structures over its stormwater assets where existing buildings are located over these assets, and building over the asset is the only feasible solution to facilitate reasonable development of the property.

Build over proposals must meet the requirements of these Guidelines.

2.1 Asset may require deviation or reconstruction

Sydney Water will assess the remaining life of the stormwater asset, and may require deviation or reconstruction of the asset in circumstances where:

- The remaining life of the asset is less than the expected life of the proposed building.
- The proposed building will intersect the asset.
- The type of asset is not suitable for building over.

If Sydney Water advises that the asset must be deviated or reconstructed as part of the development, the Water Servicing Coordinator will first explore options to deviate the stormwater asset around the proposed building and present these in a *Stormwater Deviation Report.*

After reviewing the *Stormwater Deviation Report*, Sydney Water will determine whether:

- The asset must be deviated around the proposed building (refer to section 2.2).
- The asset must be reconstructed to permit building over (refer to section 2.2).
- The asset does not require deviation or reconstruction to permit building over (refer to section 2.3).

Designer and constructor of new assets

Where a development requires deviation or reconstruction of the stormwater asset, the works will be managed by a Water Servicing Coordinator, with a designer and constructor selected by the customer and approved by Sydney Water (unless this approach is impractical).

Sydney Water will work with the customer to determine the most appropriate means of delivering the works.

2.2 Deviation or reconstruction required by Sydney Water

After reviewing the *Stormwater Deviation Report*, Sydney Water may require:

- Deviation of the stormwater asset around the proposed building.
- Reconstruction of the stormwater asset below the proposed building.

These activities must be carried out before the proposal's building works.

The Water Servicing Coordinator (WSC) will undertake the following key steps depending on whether or not reconstructing the stormwater asset is included in their responsibilities (as decided between Sydney Water and the customer under section 2.1):

Action	Deviation or reconstruction is managed by WSC	Deviation or reconstruction is managed by Sydney Water
Engage a suitably qualified and experienced designer to design the new stormwater asset.	Yes	N/A
Submit full stormwater design drawings to Sydney Water for approval.	Yes	N/A
Submit a Services Protection Report for the asset location prepared by an accredited provider or a registered surveyor.	Yes	Yes
Submit building plans and structural details to Sydney Water for approval, with clearances between the building, footings, piers and Sydney Water assets clearly marked. These plans must certify that the building and asset design will meet all of Sydney Water's requirements, including: • Structural independence between the building and the stormwater asset (refer to section 4.1). • For reconstruction – 'Build Over Clearance Requirements' are met (refer to section 4.2). • For deviation – 'Build Adjacent Clearance Requirements' are met (refer to section 4.3). • The building is outside any easement in favour of, or land owned by, Sydney Water.	Yes	Yes
HOLD POINT: Sydney Water must approve the plans before any further work may commence.	Yes	Yes
Seek and obtain three written quotations (in 'Template 14' format, with modifications to suit stormwater construction work) from qualified and experienced contractors capable of constructing the approved design. The customer will recommend a preferred constructor for Sydney Water's acceptance.	Yes	N/A
HOLD POINT: Sydney Water must accept the constructor before any further work may commence.	Yes	N/A
Supervise construction of the stormwater asset.	Yes	N/A
Supervise construction of the stormwater asset protection requirements (e.g. piering) in accordance with these Guidelines (refer to section 4).	Yes	Yes (after new asset constructed)
Submit the Project Completion Package upon completion of the works.	Yes	Yes

2.3 Deviation or reconstruction not required

Where Sydney Water has determined that reconstruction of the asset is not required to permit the building over proposal, the Water Servicing Coordinator will undertake the following key steps:

- Submit a Services Protection Report prepared by an accredited provider.
- Submit building plans and structural details to Sydney Water for approval, with clearances between the building, footings, piers and Sydney Water assets clearly marked.

  These plans must certify that the building and asset design will meet all Sydney Water's requirements, including:

  - Structural independence between the building and the stormwater asset (refer to section 4.1).
  - 'Build Over Clearance Requirements' (refer to section 4.2).
  - The building is outside any easement in favour of, or land owned by, Sydney Water.
- Submit a pre-construction closed circuit television (CCTV) or dilapidation survey report carried out by an accredited provider.

HOLD POINT: Sydney Water must approve the plans before any further work may commence.

- Supervise construction of the stormwater asset protection requirements (e.g. piering) in accordance with these Guidelines (refer to section 4).
- Submit the Project Completion Package upon completion of the work.

  The Project Completion Package must include a post-construction CCTV or dilapidation survey report carried out by an accredited provider.

3 Building Adjacent to Stormwater Assets

Sydney Water will approve a proposal to construct a building adjacent to a stormwater asset where the proposal meets the requirements of these Guidelines.

The Water Servicing Coordinator will undertake the following key steps:

- Submit a Services Protection Report prepared by an accredited provider or a registered surveyor.
- Submit building plans and structural details to Sydney Water for approval, with clearances between the building structures, footings, piers and Sydney Water assets clearly marked.

  These plans must certify that the building design will meet all Sydney Water's requirements, including:

  - Structural independence between the building and the stormwater asset (refer to section 4.1).
  - 'Build Adjacent Clearance Requirements' (refer to section 4.3).
  - The building is outside any easement in favour of, or land owned by, Sydney Water.
- Submit a pre-construction CCTV or dilapidation survey report carried out by an accredited provider.

HOLD POINT: Sydney Water must approve the plans before any further work may commence.

- Supervise construction of the stormwater asset protection requirements (e.g. piering) in accordance with these Guidelines (refer to section 4).
- Submit the Project Completion Package upon completion of the work.

  The Project Completion Package must include a post-construction CCTV or dilapidation survey report carried out by an accredited provider.

4 Asset Protection Requirements

Sydney Water requires clearances between stormwater assets and other structures for the purposes of inspecting, maintaining and reconstructing the stormwater asset when required.

4.1 Structural independence requirements

For any build over or build adjacent proposal, the customer will need to ensure the continued structural integrity and independence of both the building and the stormwater asset. Building foundations are to be designed and certified by a structural engineer and must meet the following requirements:

- The building is to be supported on pier foundations so that no load is transferred to the stormwater asset.
- The building needs to be fully supported in the event of structural failure and collapse of the stormwater asset.
- Piers are to be bored, not driven.
- Piers are to extend to at least one metre below the zone of influence of the stormwater asset, in order to provide some support should a stormwater asset failure during a storm may cause substantial erosion beneath the building.

  The gradient of the zone of influence commences at the minimum horizontal clearance from Sydney Water's assets and needs to be determined by a geotechnical or structural engineer based on their assessment of local soil conditions (typically 1H:1V in clay or 2H:1V in sand).

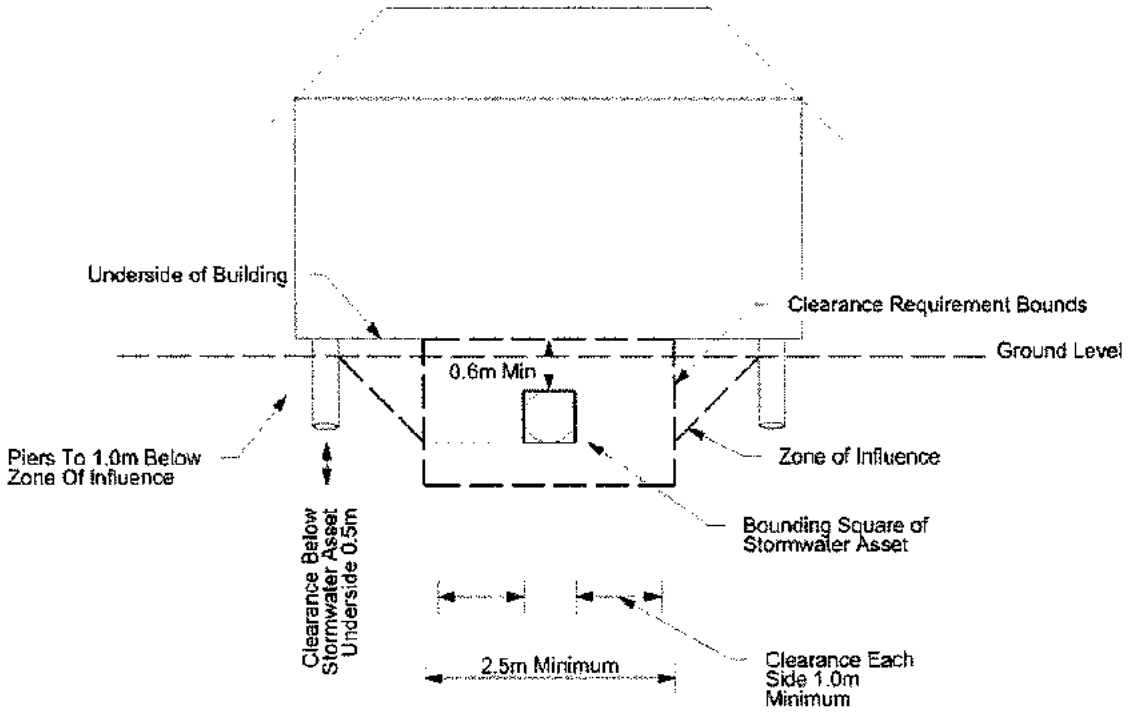
4.2 Build over clearance requirements

Sydney Water's clearance requirements for building over stormwater assets are:

- 1 metre from the outside edges of the asset to the adjacent structure.
- 0.6 metres from the outside edge of the asset to the overlying structure.

Figure 2 depicts the clearance requirements when building over a Sydney Water stormwater asset.

Figure 2 – Build over clearance requirements



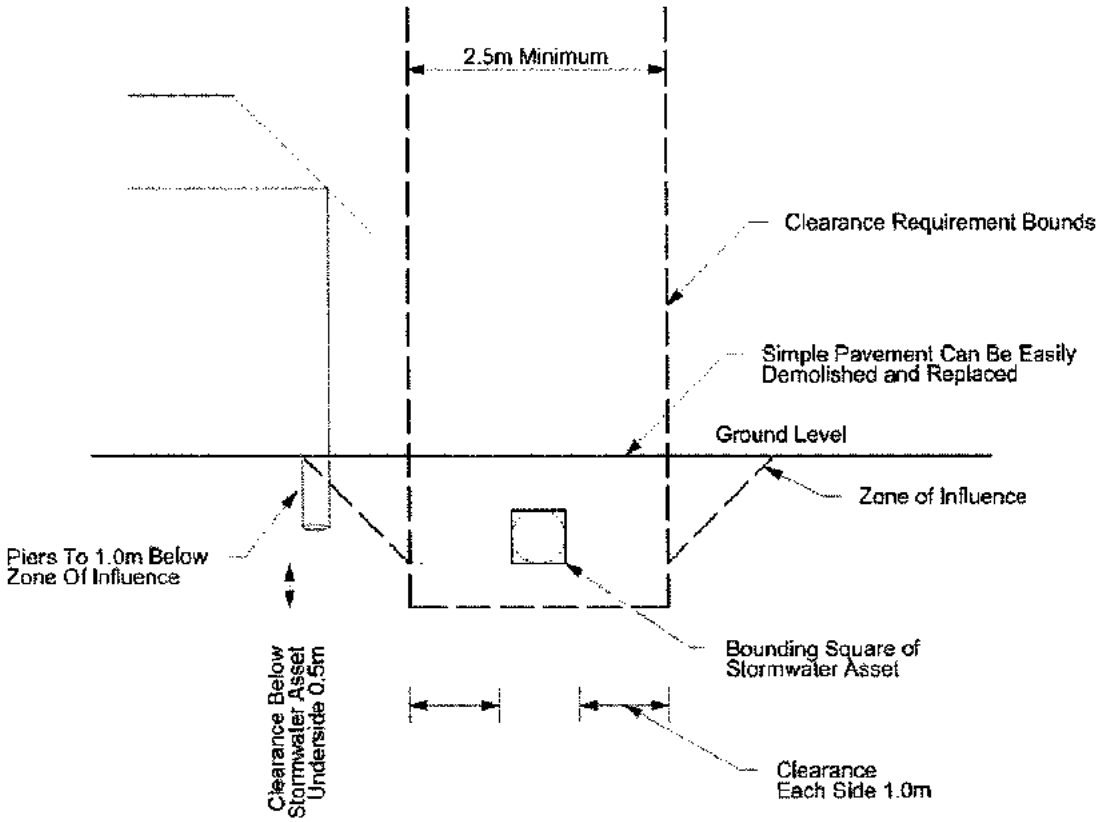
4.3 Build adjacent clearance requirements

Sydney Water's clearance requirements for building adjacent to stormwater assets are:

- 1 metre from the outside edges of the asset to the adjacent structure.
- No structure above the asset.

Figure 3 depicts the clearance requirements when building adjacent to a Sydney Water stormwater asset.

Figure 3 – Build adjacent clearance requirements



5 Context

5.1 Definitions

Term	Definition
Accredited provider	A private company that is accredited by Sydney Water to do work on Sydney Water assets. Lists of accredited providers for a number of different functions are available on Sydney Water's website, under: *Sydney Water > Building and developing > Provider information*
Build Adjacent Clearance Requirements	The reservation of space about the stormwater asset for adjacent structures, being one metre horizontally from the outside edges of the asset. Refer to Figure 3.
Build Over Clearance Requirements	The reservation of space about the stormwater asset for overlying structures, being one m horizontally and 0.6 m vertically from the outside edges of the asset. Refer to Figure 2.
Expected life	The total lifespan expected for an asset, based on a structural assessment of the asset's condition.
Flood Impact Assessment Report	A report detailing the impacts of flooding on the proposed development, and the impacts of the proposed development on local flooding. This document needs to have been completed within the past two years.
Overland flow paths	Land that carries surface stormwater flows when the volume of stormwater either exceeds that of the stormwater assets, or the flows cannot enter the assets due to topography or asset configuration.
Project Completion Package	A suite of information required under Sydney Water's e-Developer process for the completion of work and the take-over of developer works by Sydney Water. The package includes such elements as Work As Constructed drawings, completed field tests, etc.
Reasonable development	A development that either: • complies with the relevant planning controls (e.g. Local Environment Plan, Development Control Plan, State Environmental Planning Policy) or • is approved by both the relevant consent authority (e.g. Council) and Sydney Water's stormwater planning / strategy team.
Remaining life	The expected life of a stormwater asset, minus its consumed life.
Service Protection Report	A report accurately locating all Sydney Water assets in the vicinity in order to design appropriate asset protection measures. This document needs to have been completed within the past two years.
Stormwater assets	Includes open and covered channels, oviforms, pipes and box culverts, constructed from a variety of materials.

Term	Definition
Stormwater Deviation Report	A report detailing the feasibility of constructing a new stormwater asset around the proposed development. This document needs to have been completed within the past two years.
'Template 14' format	This template is called 'Schedule of rates – Wastewater mainlaying'. It is a template used for providing a complete breakdown of costs for wastewater construction works. Water Servicing Coordinators have this template. Since there is no corresponding template for stormwater works, 'Template 14' must be modified to suit any specific differences between wastewater and stormwater construction.
Water Servicing Coordinator	A private company contracted to Sydney Water to be the point of contact with customers for the provision of advice, project management and Quality Assurance in relation to the construction and protection of Sydney Water assets. A list of Water Servicing Coordinators is available from Sydney Water's website, under: *Sydney Water > Building and developing > Developing your land > Water Servicing Coordinators*
Zone of influence	The envelope within which building works (both above and below the ground level) will exert an influence on an asset. The zone of influence must be determined by a geotechnical or structural engineer based on local soil conditions (refer to section 4.1).

Appendix 1 – Flood Impact Assessment Report

Most developments in a floodplain modify existing flood behaviour. This may adversely impact the surrounding environment, including existing properties and assets. The proposed development itself is also exposed to flood risk, including risk to life and property. Sydney Water will require a Flood Impact Assessment Report whenever a development is proposed in the floodplain adjacent to or over one of its assets.

It is worth noting that both open channel and pipe/enclosed systems have associated floodplains. A brief description of the typical flooding scenario for both these cases is presented in Annexure A.

The latest version of the NSW Government Floodplain Development Manual (FDM) should be used to guide the assessment and management of flood risks.

Consideration of the flood risk

All development proposing to build over or adjacent to the Sydney Water stormwater assets should consider the assessment and management of flood risk associated with the development. Where available, local council guidelines should be followed while preparing the Flood Impact Assessment Report.

In the absence of any guidance, Sydney Water requires the following requirements to be met and relevant information presented in the report as a minimum:

1. Details of the proposed development including survey of the stormwater asset/s and the existing site and its surrounds
2. Catchment definition and the description of existing stormwater drainage system.
3. Details of the existing flood behaviour, including flood level, discharge and velocity for at least the 100 year Average Recurrence Interval (ARI) design flood. Data for other design floods may be requested depending on the nature of the development.
4. Impact of debris blockage of the stormwater asset should be considered in deriving the design flood events.
5. Flood planning level to be determined by adding 500 mm freeboard to the peak 100 year ARI flood level
6. Habitable floor levels to be at the flood planning level
7. Floor levels carport/parking space/garage may be considered at a reduced freeboard provided an acceptable level of risk to damage and safety can be demonstrated
8. Entry to below ground or basement car park would be required at the Probable Maximum Flood (PMF) level or the flood planning level, whichever is higher. Evacuation issues in the event of basement flooding should be addressed.
9. Various uses within the development should be consistent with the flood hydraulic hazard as defined in the FDM.
10. Evacuation strategies in the event of 100 year ARI and the PMF event need to be identified.
11. For significant increase in the number of occupants of the development, a Flood Emergency Response Plan would be required. The Plan should address the evacuation issues associated with the basement car parks.

12. The structural integrity of the development should be ensured by considering the floodwater flow velocity for the 100 year ARI or the PMF event, depending on the risk level. Impact of floating debris may also need to be considered where required.
13. Flood proofing strategies should be provided for various services such as electrical equipment, wiring, fuel lines and other services proposed to be connected to the development. Placement of these services should be considered above the PMF level.
14. Appropriate storage places, above the PMF level, should be identified for the hazardous material in the development.

The required information for the Flood Impact Assessment Report may not be readily available and appropriate flood modelling would be required to prepare this report.

Further advice can be obtained through Sydney Water's Liveable City Program unit.

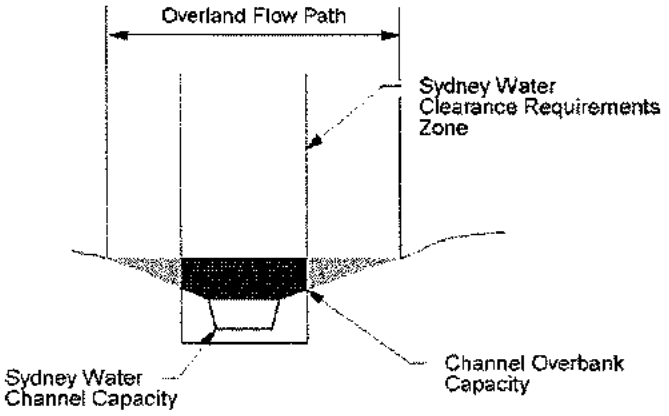
Annexure A – Rationale

When the capacity of stormwater systems is not sufficient to contain storm flows, overland flows and localised flooding occur. Stormwater assets are often located along the alignment of original watercourses (such as creeks or rivers). Building over open or enclosed stormwater assets is generally not permitted because of the adverse impacts on capacity and flow behaviour that are usually associated with building across overland flow paths.

Open channels

When the capacity of an open stormwater channel is not sufficient to convey stormwater flows, the water level rises above the top of the banks. This 'overbank flow' substantially increases the total open stormwater capacity for only moderate increases in flow depth. Figure 4 depicts the drainage capacity of an open stormwater asset, consisting of the channel flows and the 'overbank flow'.

Figure 4 – Open channel drainage capacity



Enclosed assets

In contrast, the capacity of the enclosed stormwater system usually can only increase marginally over the pipe or culvert, due to the asset being buried. Figure 5 depicts the drainage capacity of an enclosed stormwater asset, consisting of the minor flows within the pipe / culvert and the major flows overland.

Figure 5 – Enclosed asset drainage capacity