04 PROPOSED ENVELOPES

OVERSHADOWING IMPACT
21 JUNE (MID-WINTER)

Solar access is a key consideration when testing future built form and scale, with the aim to minimise the impact on the surrounds. Overshadowing in winter months is greatest due to the low solar altitude angles, while in summer, days are longest and the sun reaches its highest altitude.

The modelling on the following pages show the overshadowing impact in mid-winter (21 June) of the existing built form and the proposed maximum building envelope on the surrounding area, including public domain and private properties.

Existing built form

Figure 25 Shadows 9am - Existing built form

Figure 26 Shadows 12pm - Existing built form

Figure 27 Shadows 3pm - Existing built form

Proposed maximum building envelope

Figure 28 Shadows 9am - Proposed envelope

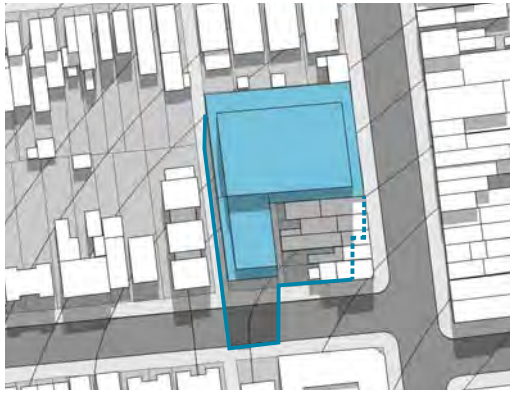


Figure 29 Shadows 12pm - Proposed envelope

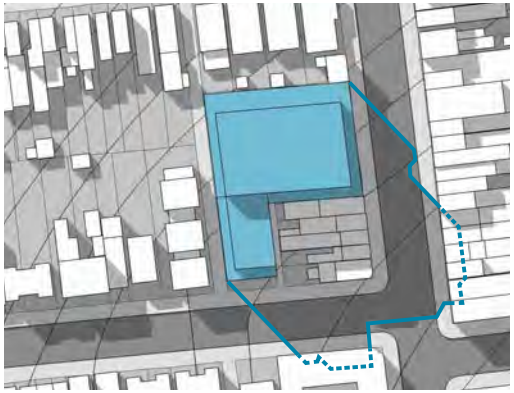


Figure 30 Shadows 3pm - Proposed envelope

04 PROPOSED ENVELOPES

ARTIST IMPRESSION
INDICATIVE BUILT FORM WITHIN ENVELOPE

Figure 31 Artist impression of potential development viewed from Norton Street

Figure 32 Existing development along Norton Street

04 PROPOSED ENVELOPES

ARTIST IMPRESSION
INDICATIVE BUILT FORM WITHIN ENVELOPE

Figure 33 Artist impression of potential development viewed from Carlisle Street

Figure 34 Existing development along Carlisle Street

CHAPTER 5

CONCLUSION

05 CONCLUSION

RECOMMENDATION

The site is very well located with good access to a wide variety of local facilities and regular public transport, making it an ideal location to provide accommodation for seniors. The current development on the site is vacant which, together with a design that does not activate Norton Street, creates a poor interface along surrounding streets and against adjoining sites.

The AJ+C Report identifies a building envelope that was informed by nine guiding principles that were developed by the community during a series of community forums. The building envelope controls are described in plan, section and/or elevation and are accompanied by objectives and provisions.

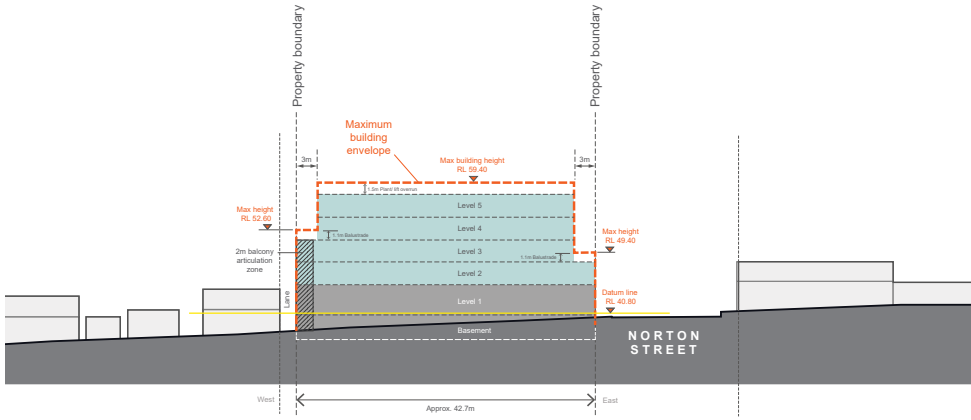
The aim of the controls is to guide a high quality built form that is appropriate to its context, provides good amenity to the site and its surroundings and improves the streetscape and public domain.

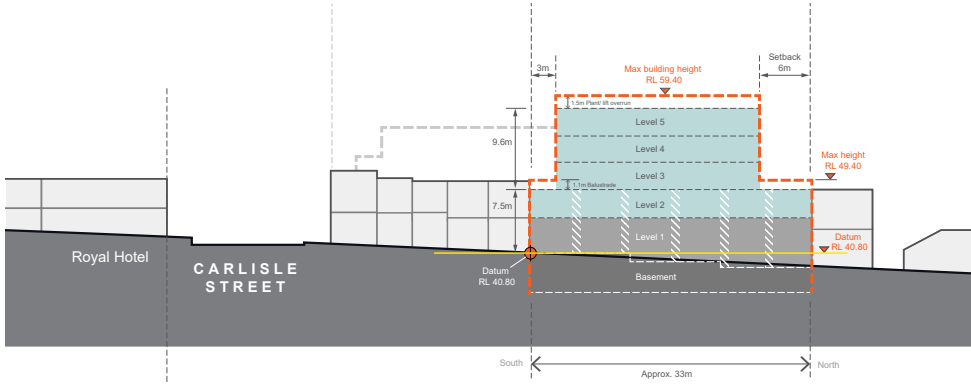
This report considers that the building envelope controls, objectives and provisions identified in the AJ+C Report are appropriate for this site as these controls:

- Respond to the current and future character of the area with development that respects the local character and enhances local residential amenity;
- Will facilitate redevelopment and will provide the opportunity to create a more attractive setting for key heritage buildings in the centre.
- Allow a sufficient scale of development in order to encourage redevelopment and provide much needed additional housing for seniors in the local area.

Detailed development control diagrams are included on the following pages. They substantially reflect the recommendations in the AJ+C Report have been prepared to clarify the building envelopes.

It is recommended that these diagrams, together with the written objectives and provisions from the AJ+C report, are included in a site specific DCP that will guide future development of this site.





RECOMMENDED DEVELOPMENT CONTROL DIAGRAMS

PLAN VIEW

Figure 35 Recommended development controls - plan diagram

04 PROPOSED ENVELOPES

RECOMMENDED DEVELOPMENT CONTROL DIAGRAMS

SECTION A

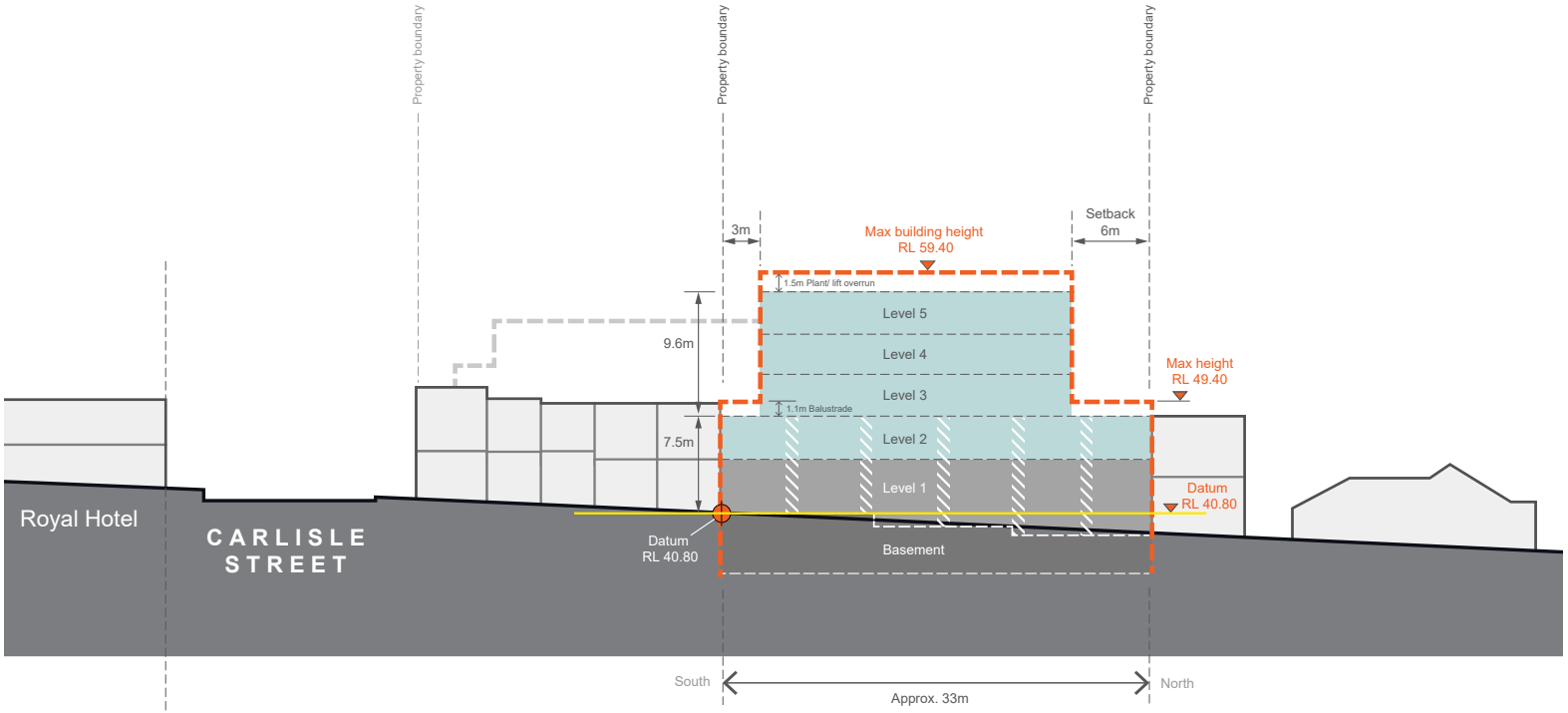


Figure 36 Recommended building envelope controls - Section A (Norton St elevation)

04 PROPOSED ENVELOPES

RECOMMENDED DEVELOPMENT CONTROL DIAGRAMS

SECTION B

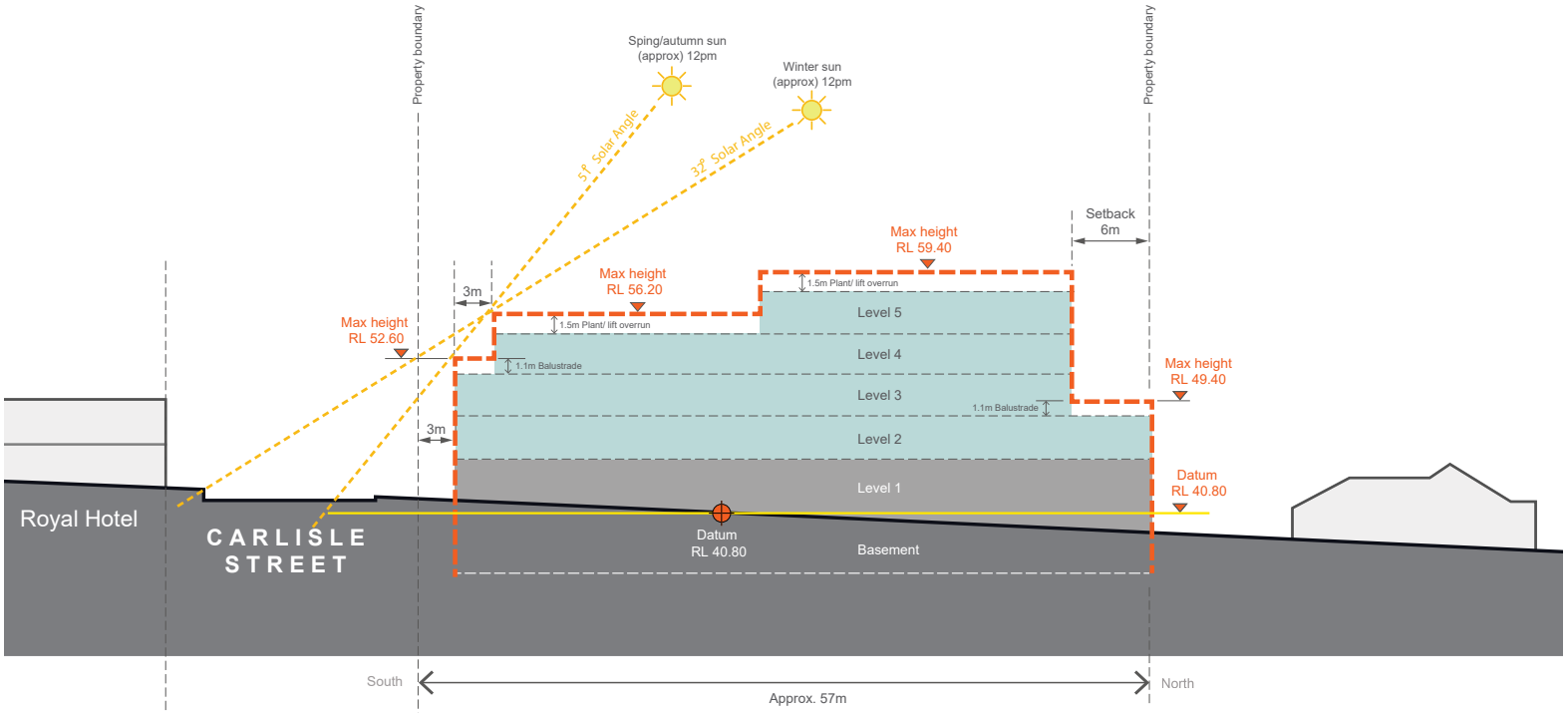


Figure 37 Recommended building envelope controls - Section B

04 PROPOSED ENVELOPES

RECOMMENDED DEVELOPMENT CONTROL DIAGRAMS

SECTION C

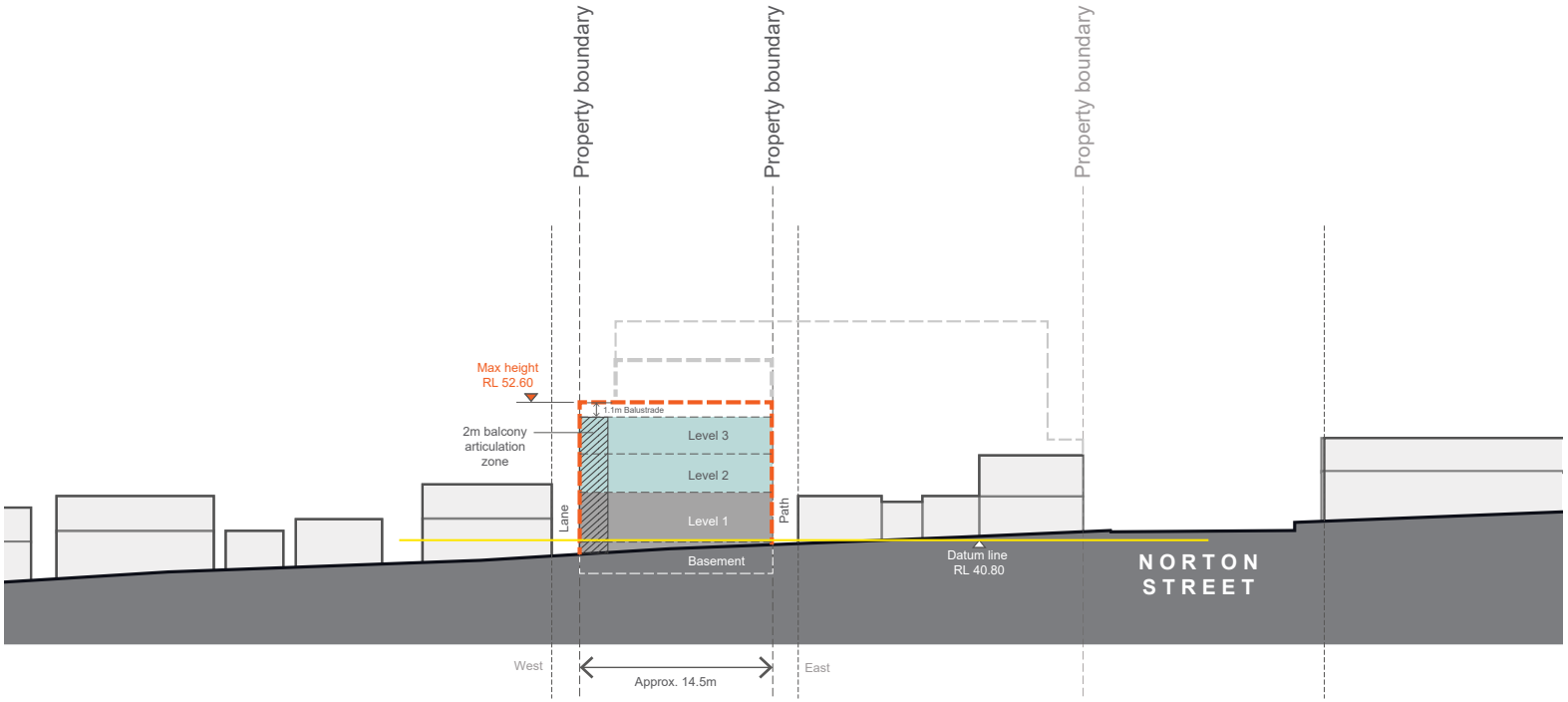


Figure 38 Recommended building envelope controls - Section C (Carlisle St elevation)

RECOMMENDED DEVELOPMENT CONTROL DIAGRAMS

SECTION D

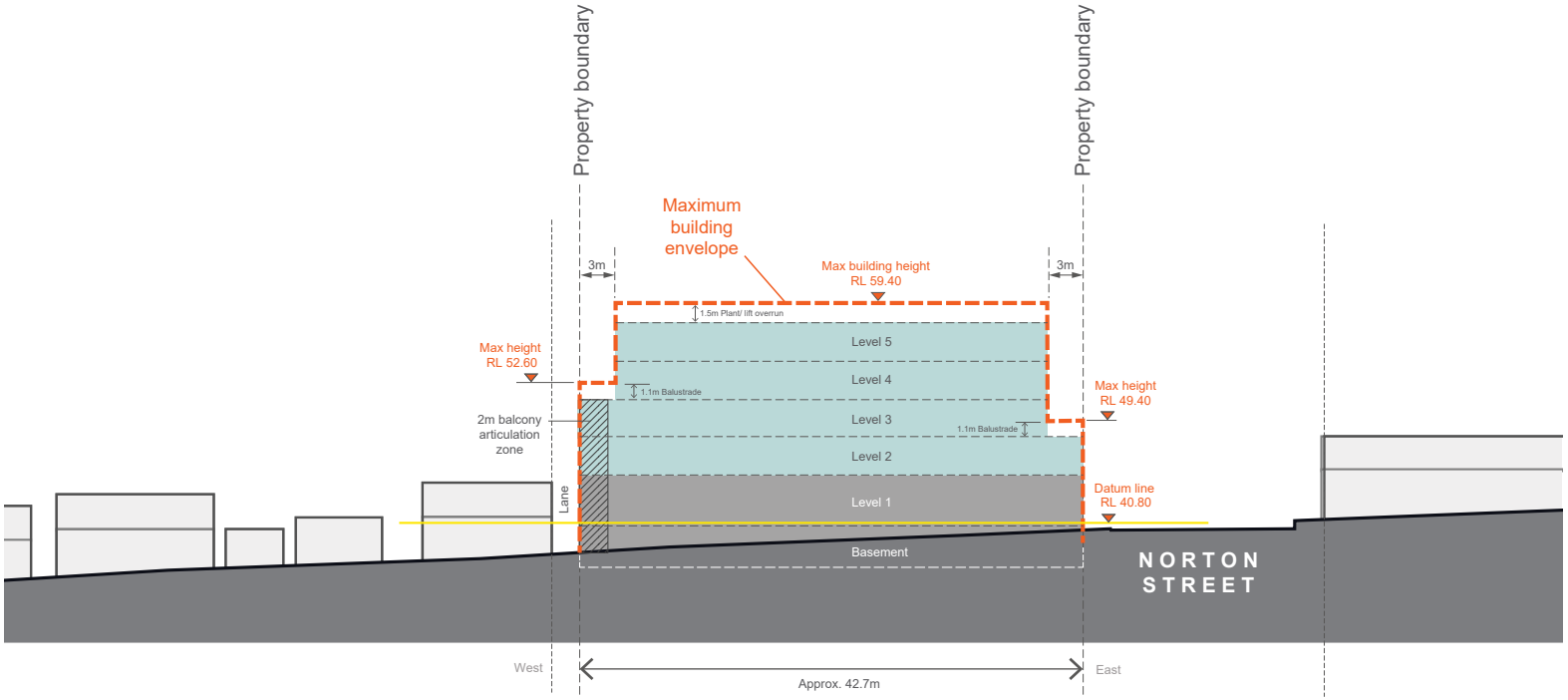
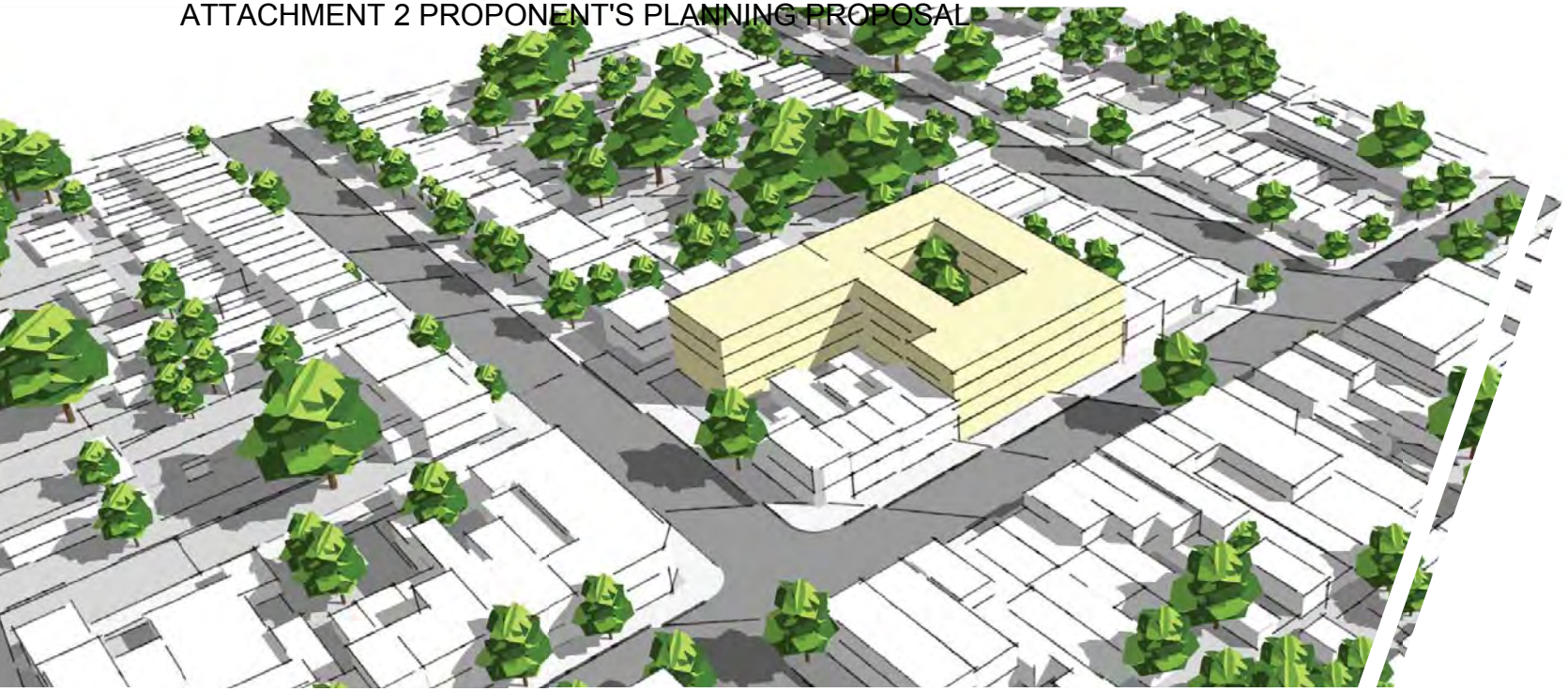


Figure 39 Recommended building envelope controls - Section D



global environmental solutions

Aircraft Noise Intrusion Assessment

168 Norton Street, Leichhardt 2040

Harold Hawkins Court

Report Number 610.16528

18 October 2016

Uniting Care c/o City Plan Services
Level 5, 222 Pitt Street,
SYDNEY NSW 2000

Version: v1.0

Aircraft Noise Intrusion Assessment

168 Norton Street, Leichhardt 2040

Harold Hawkins Court

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DOCUMENT CONTROL

Reference	Status	Date	Prepared	Checked	Authorised
610.16528	V1.0	18 October 2016	Dominic Kersch	Mark Russell	Mark Russell
610.16528	V0.1	14 October 2016	Dominic Kersch	Mark Russell	

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TABLES

FIGURES

1 INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Uniting Care c/o City Plan Services to undertake an Aircraft Noise Intrusion Assessment at 168 Norton Street, Leichhardt (the site), where a 5-storey seniors housing redevelopment is proposed. The purpose of this noise assessment is to satisfy the requirements of clause 6.8 in Leichhardt LEP 2013 so that the site can be rezoned, and following approval be assessed for subsequent DA approval.

This aircraft noise assessment includes noise level predictions from aircraft traffic arriving and departing to and from Sydney Airport in accordance with the procedures and criteria prescribed in *AS 2021:2015 Aircraft Noise Intrusion – Building Siting and Construction* which supersedes *AS 2021:2000* (that which the Leichhardt LEP 2013 refers to), and subsequently establishes in-principle acoustic design recommendations.

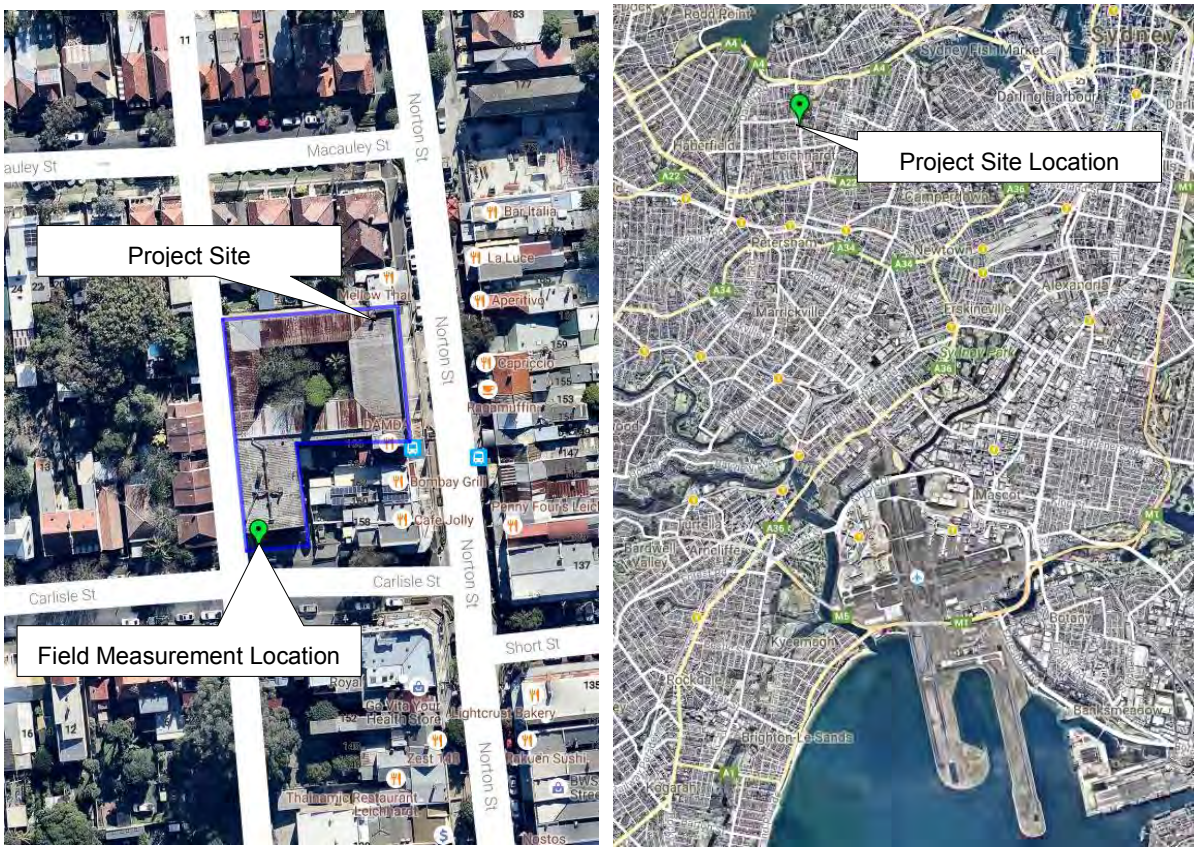
A glossary of the acoustical terminology used throughout this report is contained within **Appendix A**.

2 SITE DESCRIPTION

The site currently operates as a 4-storey nursing home under the same name – Harold Hawkins Court. The proposed Harold Hawkins Court seniors housing redevelopment site encloses commercial developments on the intersection of Norton Street and Carlisle Street, Leichhardt. The project site comprises a basement carpark and 46 apartments spread over 5 floors. The ground floor (Floor 1) is also intended for commercial use.

The project site lies north of the Main North-South runway at Sydney Airport as shown in **Figure 1**.

Figure 1 Project Site Location



Images courtesy of Nearmap

3 ASSESSMENT CRITERIA

3.1 Leichhardt LEP 2013 Clause 6.8

Development in areas subject to aircraft noise

1. The objectives of this clause are as follows:

   a) to prevent certain noise sensitive developments from being located near the Sydney (Kingsford Smith) Airport and its flight paths.

   b) to assist in minimising the impact of aircraft noise from that airport and its flight paths by requiring appropriate noise attenuation measures in noise sensitive buildings.

   c) to ensure that land use and development in the vicinity of that airport do not hinder or have any other adverse impacts on the ongoing, safe and efficient operation of that airport.

2. This clause applies to development that:

   a) is on land that:

      i) is near the Sydney (Kingsford Smith) Airport, and

      ii) is in the ANEF contour of 20 or greater, and

   b) the consent authority considers it likely to be adversely affected by aircraft noise.

3. Before determining a development application for development to which this clause applies, the consent authority:

   a) must consider whether the development will result in an increase in the number of dwellings or people affected by aircraft noise, and

   b) must consider the location of the development in relation to the criteria set out in Table 2.1 (Building Site Acceptability Based on ANEF Zones) in AS 2021-2000, and

   c) must be satisfied the development will meet the indoor design sound levels shown in Table 3.3 (Indoor Design Sound Levels for Determination of Aircraft Noise Reduction) in AS 2021-2000.

3.2 AS 2021:2015 Aircraft Noise Intrusion Procedure

AS 2021:2015 ranks sites as “unacceptable”, “conditionally acceptable” or “acceptable” developments based on the site location relative to the ANEF (Australian Noise Exposure Forecast) contours. Sites located between the ANEF 20 and ANEF 25 contours are classified acceptable conditional on the residence being designed to control noise from aircraft to indoors. Residential sites located within the ANEF 25 contour are classified “unacceptable”, however relevant planning authority may determine a development necessary within existing built-up areas.

For conditionally acceptable sites, it is then required that the aircraft noise level at the site be determined. The aircraft noise level can be found using tables of aircraft noise data provided in the Standard, and taking into consideration the distance of the site from the closest end of the nearest runway (DS), the distance from the furthest end of the nearest runway (DT) and the distance to a projection of the flight path on the ground (DL).

The aircraft noise reduction (**ANR**), that the is the level of sound attenuation provided by the building envelope, is determined for the site based on the identified external aircraft noise level and the indoor design noise levels (given later in this report). Procedures for determining the necessary acoustic rating, expressed as a Weighted Sound Reduction Index (**Rw**), of individual building elements are also included in the Standard. Calculations take into consideration room size, the area of each façade element, the orientation of the façade with respect to noise from the runway and room use.

The project site is shown in **Figure 2**.

Figure 2 Australian Noise Exposure Forecast (ANEF) 2033

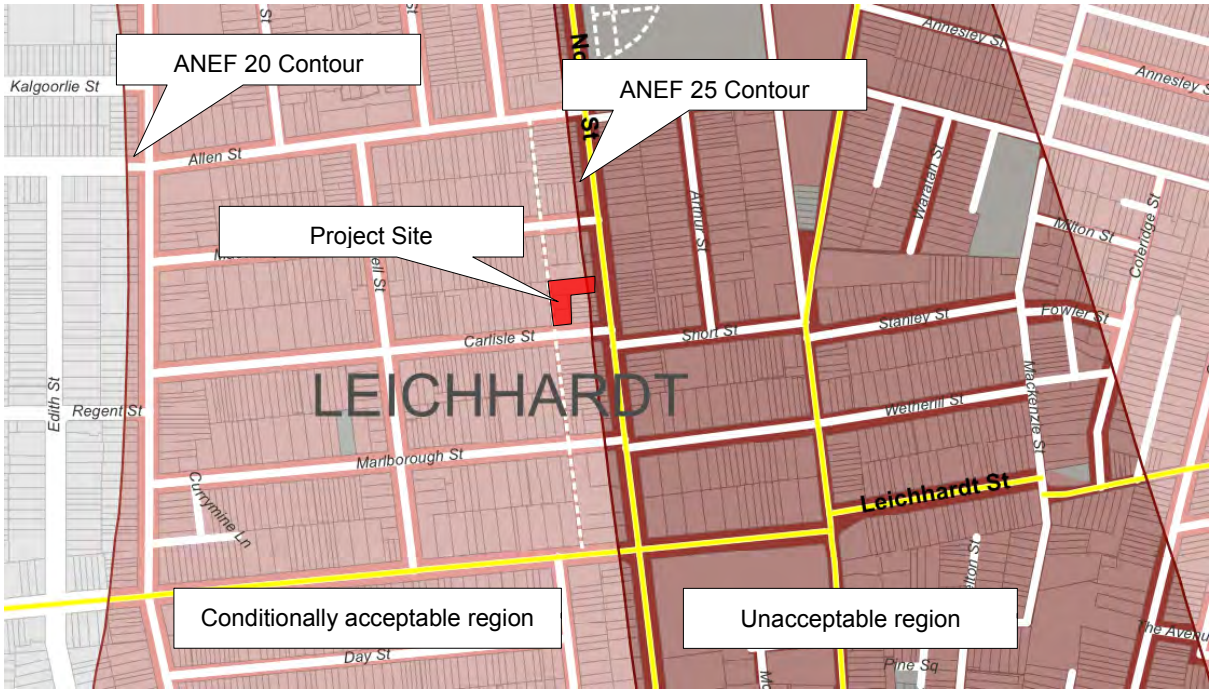


Image courtesy of Leichhardt Municipal Council

From Figure 2 it can be seen that the development site is within the ANEF 20 contour, north of the flight path of aircraft using the main north south runway. As the majority of site is located inside the ANEF 20 contour, the site is acceptable for residential development provided that an assessment of aircraft noise is made in accordance with the Standard.

3.3 Maximum Internal Noise Levels due to Aircraft Noise Intrusion

Recommended indoor design sound levels (effective maximum levels) for various areas of occupancy are provided in Table 3.3 of *AS 2021:2015*. The appropriate sound levels for this development are presented in **Table 1**.

Table 1 Indoor Design Sound Levels

Occupancy Type	Area of Occupancy	Indoor Design Sound Level[1]
Nursing home / Home units	Sleeping areas, wards, consulting rooms	50 dBA
	Other habitable spaces	55 dBA
	Bathrooms, toilets, laundries, wet rooms	60 dBA
Commercial[2]	Private Offices, conference rooms	55 dBA

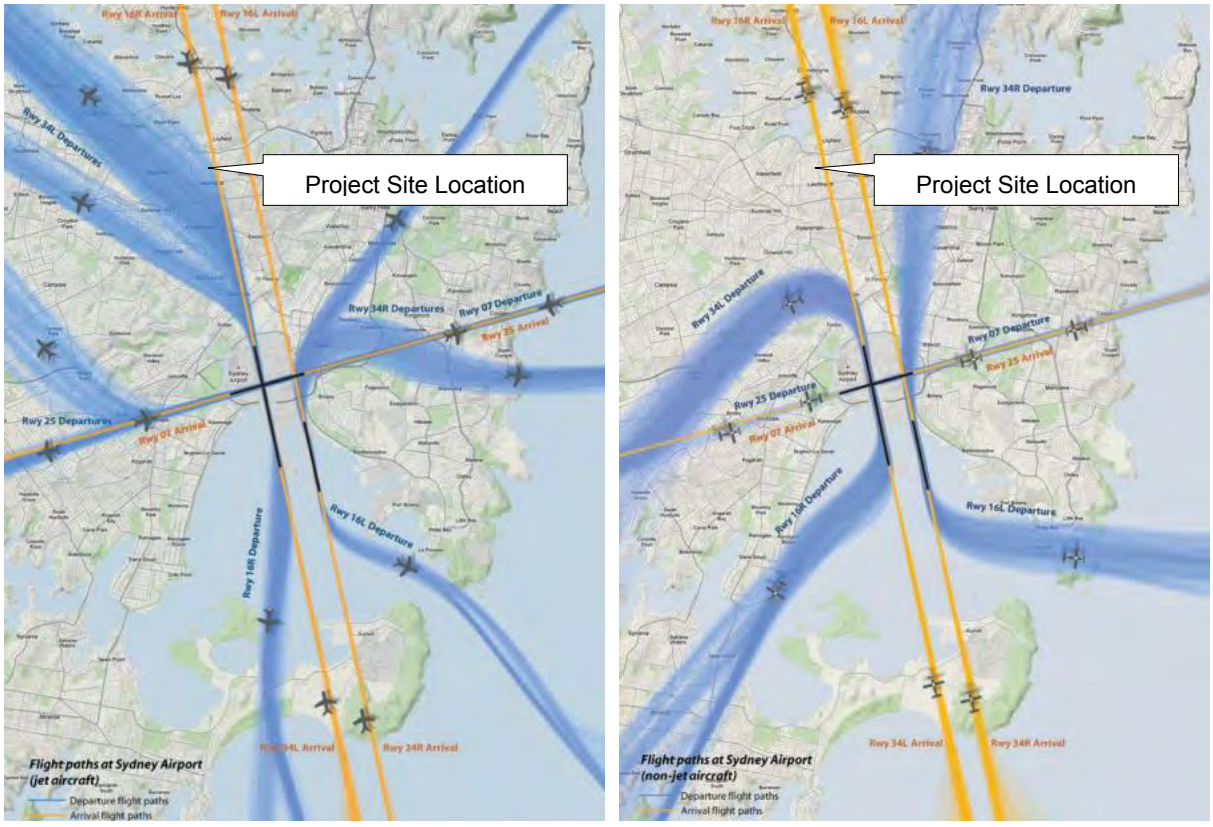
Note 1 The indoor design sound levels are hypothesised values based on Australian experience. A design level is the maximum level (dBA 'slow' speed rectification) from an aircraft flyover which, when heard inside a building by the average listener, will be judged as not intrusive or annoying by that listener while carrying out a specified activity.

Note 2: The commercial Indoor Design Sound Level is a worst-case requirement for private offices and consulting rooms only. Higher indoor design sound levels may apply for open offices, shops, supermarkets and showrooms - see Table 3.3 of AS 2021:2015.

4 EXISTING AIRCRAFT ACOUSTICAL ENVIRONMENT

The project site lies approximately 5,600 m, 6,800 m and 8,400 m north of the Main North-South, East-West and Parallel North-South runways at Sydney Airport respectively. Arrival and departure jet aircraft and non-jet aircraft flight paths to and from Sydney Airport are shown in **Figure 3**.

Figure 3 Flight Path Maps of Sydney Airport (Jet Aircraft and Non-jet Aircraft respectively)



Images courtesy of Sydney Airport Master Plan 2033

Reference to the flight path maps above indicates that the project site is mostly affected by 16R Arrivals and 34L Departures on the Main North-South runway. For both of these flight paths, calculations as stipulated in *AS 2021:2015* have been performed to predict the noise emissions from aircraft flyovers. Land height corrections at 30 m have been applied to account for the difference in elevation between the project site and Sydney Airport.

In accordance with the methods provided in *AS 2021-2015*, distance coordinates for the site relative to the two Sydney Airport flight paths have been determined. Results are presented in **Table 2** below.

Table 2 Distance Coordinates for 168 Norton Street, Leichhardt

Runway	Distance coordinate (inc. Elevation Adjustment)		
	DS	**DL**	**DT**
Main North -South runway 16L Arrival flight path	250 m	5,130 m	9,390 m
Main North -South runway 34R Departure flight path	1,600 m	4,910 m	8,250 m

The calculations revealed that the loudest charted aircraft with considerations to the distance coordinates above, a Boeing 747-400, was predicted to contribute maximum noise levels of **81 dBA** and **68 dBA** ('Slow' speed rectification) to the project site from the 16R arrival and 34L departure flight paths respectively. For conservativeness in this assessment, maximum noise levels are herein assumed to be those predicted for from a Boeing 747-400 (**81 dBA**).

The aircraft noise level is an average maximum level and it should be recognized that a percentage of aircraft movements may produce noise that exceeds the derived level. Higher noise levels are possible from curved flight paths and variations in altitude resulting in aircraft directly over the site.

5 ATTENDED AIRCRAFT NOISE MEASUREMENTS

To further quantify predictions undertaken in accordance with the standard, short-term attended noise measurements were conducted on Tuesday 2 August 2016 at the location shown in **Figure 1**.

Instrumentation for the survey comprised one Brüel & Kjær 2260 sound level meter (Serial No. 2115053), fitted with a microphone windshield. Calibration of the sound level meter was checked prior to and following measurements. Drift in calibration did not exceed ± 0.5 dB. All equipment carried appropriate and current NATA (or manufacturer) calibration certificates. Measurements were conducted in accordance with AS 1055.1-1997: *"Acoustics - Description and measurement of environmental noise - General procedures"*.

The maximum measured aircraft noise level of **79 dBA** ('Slow' speed rectification) was attributed to an Airbus A330-301 on the 16R arrival flight path.

5.1 Aircraft Noise Reduction

The indoor design sound levels in **Table 1** have been used to derive the aircraft noise reduction (ANR), in dBA, to be incorporated in the building's envelope. **Table 3** presents the required ANR for this development.

Table 3 Aircraft Noise Reduction

Occupancy Type	Area of Occupancy	Aircraft Noise Reduction
Nursing Home / Home units	Sleeping areas, wards, consulting rooms	31 dBA
	Other habitable spaces	26 dBA
	Bathrooms, toilets, laundries, wet rooms	21 dBA
Commercial[1]	Private offices, conference rooms	26 dBA

Note 1: The commercial ANR is a worst-case requirement for private offices and consulting rooms only. Higher indoor design sound levels may apply for open offices, shops, supermarkets and showrooms - see Table 3.3 of AS 2021:2015.

5.2 Alternative Ventilation Requirements

The internal design sound levels and the ANR derived from the above levels assume that the windows and external entry doors are closed. As it is necessary for the windows and doors to remain closed to comply with *AS 2021:2015*, ventilation approved by Leichhardt Municipal Council and in accordance with relevant regulations such as the Building Code of Australia will need to be installed.

When specified, the ventilation system will require review from an acoustic consultant such that the design does not adversely affect the amenity of nearby sensitive receivers or compromise the acoustic integrity of the building envelope construction recommended in this report.

5.3 Noise Insulation Requirements

The calculation procedure in *AS 2021:2015* establishes the required noise insulation performance of each building envelope component so that the internal noise level is achieved whilst an equal contribution of aircraft noise energy is distributed across each component. Thus, building envelope components with a greater surface area must offer greater noise insulation performance.

As the project is seeking the site to be re-zoned, detailed design of the façade envelope has not been undertaken. Preliminary designs indicating site arrangements have been used for the purposes of this acoustic assessment. All recommendations made within this report will need to be verified following completion of the detailed design layouts.

Typical noise reduction of each component of the building is presented as a Weighted Sound Reduction Index (Rw) rating in decibels shown in **Table 4** and **Table 5**. These Rw values are only intended as a preliminary indication of the acoustic performance requirements of the main components of the building envelope.

A range of Rw values for each building element has been provided in **Table 4** and **Table 5**. The range represents the highest and typical Rw for a given element and is dependent on the size and orientation of the particular area of occupancy for each façade These are intended to be used as a guide as to the acoustical requirements which will need to be consider for a given facade during DA design.

Table 4 Acoustic Rating (Rw) for External Building Components – Levels 1-4 with rooms above

	Area of Occupancy	Wall	Glazing	External Door	Roof / Ceiling
North Facades					
Nursing Home	Sleeping areas, wards, consulting rooms	43-52	37-41	n/a	n/a
	Other habitable spaces	35	30-31	n/a	n/a
	Bathrooms, toilets, laundries, wet rooms	44	n/a	n/a	n/a
Commercial	Private Offices, conference rooms	39-40	26-29	n/a	n/a
East Facades					
Nursing Home	Sleeping areas, wards, consulting rooms	43-51	39-41	n/a	n/a
	Other habitable spaces	35-44	29-31	23-24	n/a
	Bathrooms, toilets, laundries, wet rooms	44	n/a	n/a	n/a
Commercial	Private Offices, conference rooms	35-40	28-31	n/a	n/a
South Facades					
Nursing Home	Sleeping areas, wards, consulting rooms	47-50	37-40	n/a	n/a
	Other habitable spaces	39-43	30-35	23-24	n/a
	Bathrooms, toilets, laundries, wet rooms	44	n/a	n/a	n/a
West Facades					
Nursing Home	Sleeping areas, wards, consulting rooms	44-47	34-36	n/a	n/a
	Other habitable spaces	39-44	31-35	27	n/a
	Bathrooms, toilets, laundries, wet rooms	n/a	n/a	n/a	n/a

Table 5 Acoustic Rating (Rw) for External Building Components – Levels 4-5 without rooms above

	Area of Occupancy	Wall	Glazing	External Door	Roof / Ceiling
North Facades					
Nursing Home	Sleeping areas, wards, consulting rooms	51-54	39-41	n/a	45
	Other habitable spaces	41-45	32-34	n/a	37-39
	Bathrooms, toilets, laundries, wet rooms	n/a	n/a	n/a	n/a
East Facades					
Nursing Home	Sleeping areas, wards, consulting rooms	50-55	39-40	n/a	45
	Other habitable spaces	44-45	34	n/a	38-39
	Bathrooms, toilets, laundries, wet rooms	49	n/a	n/a	34
South Facades					
Nursing Home	Sleeping areas, wards, consulting rooms	48-55	39-40	n/a	45
	Other habitable spaces	43-44	33-34	n/a	37-38
	Bathrooms, toilets, laundries, wet rooms	40	n/a	n/a	32
West Facades					
Nursing Home	Sleeping areas, wards, consulting rooms	48-49	37	n/a	45
	Other habitable spaces	43	32-33	n/a	37
	Bathrooms, toilets, laundries, wet rooms	n/a	n/a	n/a	n/a

6 SUMMARY

An assessment of aircraft noise at 168 Norton Street, Leichhardt for the Harold Hawkins Court redevelopment site has been carried out in accordance with *AS 2021:2015* for the purpose of evaluating the site for re-zoning purposes. The maximum level of aircraft noise predicted at the proposed residence is **81 dBA**. Preliminary façade Rw values based on concept site layouts have been provided in **Table 4** and **Table 5**. It is essential that the Acoustic Ratings (Rw) presented in this report are reviewed during detailed design of the project.

Based upon the findings of this assessment, the development as proposed appears satisfactory in terms of its general planning arrangement.

Appendix A

Acoustic Terminology

1 Sound Level or Noise Level

The terms 'sound' and 'noise' are almost interchangeable, except that in common usage 'noise' is often used to refer to unwanted sound.

Sound (or noise) consists of minute fluctuations in atmospheric pressure capable of evoking the sense of hearing. The human ear responds to changes in sound pressure over a very wide range. The loudest sound pressure to which the human ear responds is ten million times greater than the softest. The decibel (abbreviated as dB) scale reduces this ratio to a more manageable size by the use of logarithms.

The symbols SPL, L or L_P are commonly used to represent Sound Pressure Level. The symbol L_A represents A-weighted Sound Pressure Level. The standard reference unit for Sound Pressure Levels expressed in decibels is 2×10^{-5} Pa.

2 'A' Weighted Sound Pressure Level

The overall level of a sound is usually expressed in terms of dBA, which is measured using a sound level meter with an 'A-weighting' filter. This is an electronic filter having a frequency response corresponding approximately to that of human hearing.

People's hearing is most sensitive to sounds at mid frequencies (500 Hz to 4000 Hz), and less sensitive at lower and higher frequencies. Thus, the level of a sound in dBA is a good measure of the loudness of that sound. Different sources having the same dBA level generally sound about equally loud.

A change of 1 dBA or 2 dBA in the level of a sound is difficult for most people to detect, whilst a 3 dBA to 5 dBA change corresponds to a small but noticeable change in loudness. A 10 dBA change corresponds to an approximate doubling or halving in loudness. The table below lists examples of typical noise levels

Sound Pressure Level (dBA)	Typical Source	Subjective Evaluation
130	Threshold of pain	Intolerable
120	Heavy rock concert	Extremely noisy
110	Grinding on steel	
100	Loud car horn at 3 m	Very noisy
90	Construction site with pneumatic hammering	
80	Kerbside of busy street	Loud
70	Loud radio or television	
60	Department store	Moderate to quiet
50	General Office	
40	Inside private office	Quiet to very quiet
30	Inside bedroom	
20	Recording studio	Almost silent

Other weightings (eg B, C and D) are less commonly used than A-weighting. Sound Levels measured without any weighting are referred to as 'linear', and the units are expressed as dB(lin) or dB.

3 Sound Power Level

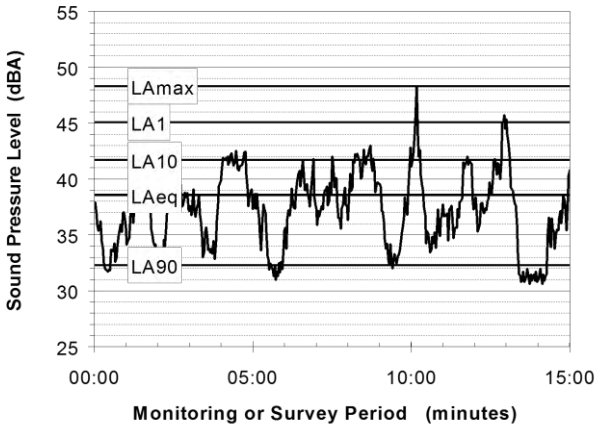
The Sound Power of a source is the rate at which it emits acoustic energy. As with Sound Pressure Levels, Sound Power Levels are expressed in decibel units (dB or dBA), but may be identified by the symbols SWL or L_W, or by the reference unit 10^{-12} W.

The relationship between Sound Power and Sound Pressure may be likened to an electric radiator, which is characterised by a power rating, but has an effect on the surrounding environment that can be measured in terms of a different parameter, temperature.

4 Statistical Noise Levels

Sounds that vary in level over time, such as road traffic noise and most community noise, are commonly described in terms of the statistical exceedance levels L_{AN}, where L_{AN} is the A-weighted sound pressure level exceeded for N% of a given measurement period. For example, the L_{A1} is the noise level exceeded for 1% of the time, L_{A10} the noise exceeded for 10% of the time, and so on.

The following figure presents a hypothetical 15 minute noise survey, illustrating various common statistical indices of interest.



Of particular relevance, are:

L_{A1} The noise level exceeded for 1% of the 15 minute interval.

L_{A10} The noise level exceed for 10% of the 15 minute interval. This is commonly referred to as the average maximum noise level.

L_{A90} The noise level exceeded for 90% of the sample period. This noise level is described as the average minimum background sound level (in the absence of the source under consideration), or simply the background level.

L_{Aeq} The A-weighted equivalent noise level (basically the average noise level). It is defined as the steady sound level that contains the same amount of acoustical energy as the corresponding time-varying sound.

When dealing with numerous days of statistical noise data, it is sometimes necessary to define the typical noise levels at a given monitoring location for a particular time of day. A standardised method is available for determining these representative levels.

This method produces a level representing the 'repeatable minimum' L_{A90} noise level over the daytime and night-time measurement periods, as required by the EPA. In addition the method produces mean or 'average' levels representative of the other descriptors (L_{Aeq}, L_{A10}, etc).

5 Tonality

Tonal noise contains one or more prominent tones (ie distinct frequency components), and is normally regarded as more offensive than 'broad band' noise.

6 Impulsiveness

An impulsive noise is characterised by one or more short sharp peaks in the time domain, such as occurs during hammering.

7 Frequency Analysis

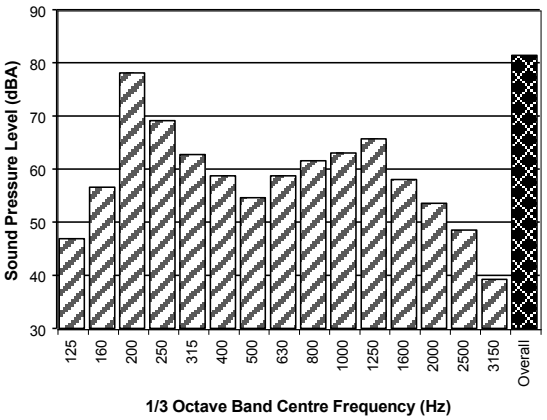
Frequency analysis is the process used to examine the tones (or frequency components) which make up the overall noise or vibration signal. This analysis was traditionally carried out using analogue electronic filters, but is now normally carried out using Fast Fourier Transform (FFT) analysers.

The units for frequency are Hertz (Hz), which represent the number of cycles per second.

Frequency analysis can be in:

- Octave bands (where the centre frequency and width of each band is double the previous band)
- 1/3 octave bands (3 bands in each octave band)
- Narrow band (where the spectrum is divided into 400 or more bands of equal width)

The following figure shows a 1/3 octave band frequency analysis where the noise is dominated by the 200 Hz band. Note that the indicated level of each individual band is less than the overall level, which is the logarithmic sum of the bands.



8 Vibration

Vibration may be defined as cyclic or transient motion. This motion can be measured in terms of its displacement, velocity or acceleration. Most assessments of human response to vibration or the risk of damage to buildings use measurements of vibration velocity. These may be expressed in terms of 'peak' velocity or 'rms' velocity.

The former is the maximum instantaneous velocity, without any averaging, and is sometimes referred to as 'peak particle velocity', or PPV. The latter incorporates 'root mean squared' averaging over some defined time period.

Vibration measurements may be carried out in a single axis or alternatively as triaxial measurements. Where triaxial measurements are used, the axes are commonly designated vertical, longitudinal (aligned toward the source) and transverse.

The common units for velocity are millimetres per second (mm/s). As with noise, decibel units can also be used, in which case the reference level should always be stated. A vibration level V, expressed in mm/s can be converted to decibels by the formula 20 log (V/V_o), where V_o is the reference level (10^{-9} m/s). Care is required in this regard, as other reference levels may be used by some organizations.

9 Human Perception of Vibration

People are able to 'feel' vibration at levels lower than those required to cause even superficial damage to the most susceptible classes of building (even though they may not be disturbed by the motion). An individual's perception of motion or response to vibration depends very strongly on previous experience and expectations, and on other connotations associated with the perceived source of the vibration. For example, the vibration that a person responds to as 'normal' in a car, bus or train is considerably higher than what is perceived as 'normal' in a shop, office or dwelling.

10 Over-Pressure

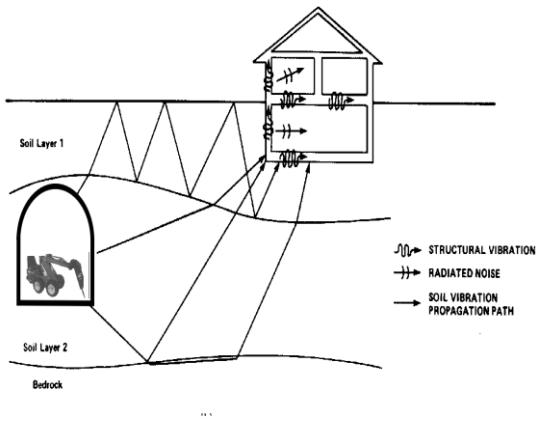
The term 'over-pressure' is used to describe the air pressure pulse emitted during blasting or similar events. The peak level of an event is normally measured using a microphone in the same manner as linear noise (ie unweighted), at frequencies both in and below the audible range.

11 Ground-borne Noise, Structure-borne Noise and Regenerated Noise

Noise that propagates through a structure as vibration and is radiated by vibrating wall and floor surfaces is termed 'structure-borne noise', 'ground-borne noise' or 'regenerated noise'. This noise originates as vibration and propagates between the source and receiver through the ground and/or building structural elements, rather than through the air.

Typical sources of ground-borne or structure-borne noise include tunnelling works, underground railways, excavation plant (eg rockbreakers), and building services plant (eg fans, compressors and generators).

The following figure presents the various paths by which vibration and ground-borne noise may be transmitted between a source and receiver for construction activities occurring within a tunnel.



The term 'regenerated noise' is also used in other instances where energy is converted to noise away from the primary source. One example would be a fan blowing air through a discharge grill. The fan is the energy source and primary noise source. Additional noise may be created by the aerodynamic effect of the discharge grill in the airstream. This secondary noise is referred to as regenerated noise

CITY PLAN SERVICES

Heritage Impact Statement
UnitingCare Planning Proposal

168 Norton Street, Leichhardt

Submitted to UnitingCare

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July 2016 | 16-055

Report Revision History

Revision	Date Issued	Prepared by	Reviewed by	Verified by
01	1/07/16	**Brittany Freelander** *Heritage Consultant*	**Amanda Reynolds** *Senior Heritage Consultant*	**Kerime Danis** *Director - Heritage*

CERTIFICATION
This report has been authorised by City Plan Heritage P/L, with input from a number of other expert consultants, on behalf of the Client. The accuracy of the information contained herein is to the best of our knowledge not false or misleading. The comments have been based upon information and facts that were correct at the time of writing this report.

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1. Introduction

1.1 Background

City Plan Heritage (CPH) has been engaged by UnitingCare to prepare the following Heritage Impact Statement (HIS) to accompany a Planning Proposal submission to Inner West Council for a change in the building envelope of 168 Norton Street, Leichhardt.

168 Norton Street is not identified as a heritage item but is located within the Whaleyborough Heritage Conservation Area (HCA) (C13) as identified under Schedule 5 of the Leichhardt Local Environment Plan (LEP) 2013. The site is also located within proximity to the Wetherill Estate HCA (C14) and heritage item "Royal Hotel, including interiors" located at 156 Norton Street (item no. I682).

In accordance with relevant controls regarding heritage on the Leichhardt LEP 2013 and the Leichhardt Development Control Plan (DCP) 2013, this HIS assesses the heritage significance of the subject site and the likely impacts of the proposed rezoning on the established heritage significance of the heritage conservation area and heritage items located in close proximity.

It is understood that extensive consultation has occurred between Uniting Care and Inner West Council regarding the potential future development of the site and the Marion and Wetherill Streets sites. Public consultation sessions were held by Council along with the preparation of draft building envelopes prepared by AJC in consultation with Council. Subsequently, a paper was submitted at a Council meeting in mid-2015, endorsing the draft building envelopes and inviting Uniting Care to prepare Planning Proposals for the three sites. A Memorandum of Understanding (MoU) was also produced, detailing the potential outcomes for each site and the benefits that could be created for the public.

1.2 Site Location

The subject site is located on the western side of Norton Street with some access available from Carlisle Street. The site has a frontage to Norton Street, towards which the principal elevation of the existing building is oriented. For a more detailed description of the site and its context, see Section 2- Site Context and Description.

Figure 1: Aerial view of the subject site, outlined in red. (Source: SIX Maps 2016)

1.3 Methodology

This Heritage Impact Statement has been prepared in accordance with the NSW Heritage Manual 'Statements of Heritage Impacts' and 'Assessing Heritage Significance' guidelines. The philosophy and process adopted is that guided by the Australia ICOMOS Burra Charter 2013. The subject proposal has been assessed in relation to the relevant controls and provisions contained within the Leichhardt LEP 2012 and the Leichhardt DCP 2012.

1.4 Author Identification

The following report has been prepared by Brittany Freelander (Heritage Consultant) and reviewed by Amanda Reynolds (Senior Heritage Consultant). Kerime Danis (Director - Heritage) has also reviewed and endorsed its content.

1.5 Limitations

- CPH were not involved in the design process;
- A detailed archaeological assessment including an assessment of Aboriginal cultural heritage values does not form part of the scope of this HIS.

2. Site Context and Description

2.1 Site Context

The subject site is located in the inner western suburb of Leichhardt, which is located approximately 7km southwest of the Sydney Central Business District (CBD). It is a mixed residential and commercial suburb located within the local government area of the Inner West Council.

The subject site is located within a rectangular shaped block bound to the north by Macauley Street, Carlisle Street to the south, Norton Street to the east and Cromwell Street to the west. A rear lane runs along the rear of the subject site, extending from Allen Street to Marion Street. Norton Street is the main commercial strip within Leichhardt and is also considered the heart of the suburb.

As detailed in Section 1.1, the subject site is not listed as a heritage item but is located within the Whaleyborough Estate HCA and is also in close proximity to a number of heritage items as identified under the Leichhardt LEP 2012.

The Whaleyborough Estate HCA is described in the Leichhardt DCP 2012 as follows:[1]

> *The Whaleyborough Conservation Area lies to the west of Norton Street between Marion, Elswick and Allen Streets. Land slopes gently downhill to the west of the Norton Street ridge.*
>
> *A spacious low-rise residential area with wide streets and nature strips and the sense of garden space at the back of each building. A mixture of free-standing houses and terraces.*
>
> *A mixture of single-storey and two-storey development.*
>
> *Parapeted two storey commercial buildings and pubs along Norton Street.*
>
> *A considerable collection of ecclesiastical buildings.*

[1] Leichhardt Development Control Plan 2012, Conservation Area 3 - Whaleyborough Estate, http://www.leichhardt.nsw.gov.au/Planning---Development/Planning-Controls--DCPs--LEPs--VPAs-/Heritage/Conservation-Area-3-Whaleyborough-Estate

A range in the age of the buildings dating from 1880s–1930s. Most buildings belong to the nineteenth century.

Brick is by far the most dominant building material, and is used in a variety of surfaces — as plastered brick through the 1880s, as face brick with plaster decoration during the early 1900s and as dark blue face brick into the 1930s.

Unglazed terracotta tiles form the predominant roof cladding. There are also some slate roofs and the occasional iron roof.

Suspended awnings along Norton Street.

Sandstone kerbs and gutters remain for considerable sections of all streets.

There are some original iron palisade fences.

Crepe myrtle plantings in Carlisle Street.

The following images provide an overview of the site's context.

Figure 2: Cadastral map showing the location of the subject site, outlined in red. (Source: SIX Maps 2016)

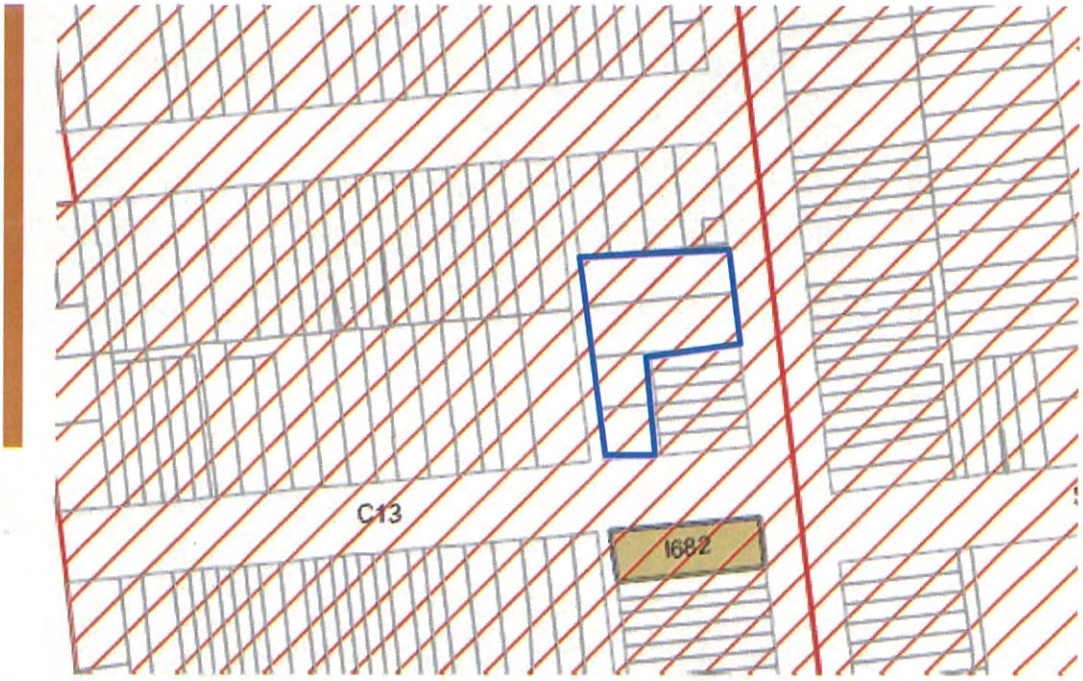

Figure 3: Leichhardt LEP 2012 Heritage Map 005 showing the location of the subject site, outlined in blue. (Source: Leichhardt LEP 2012, Heritage Map 005)

Figure 4: Views looking north and south along Norton Street. The subject site can be seen in both images.

Figure 5: Victorian commercial terraces directly abutting the subject site to the south and properties located directly north of the subject site.

Figure 6: Views looking east and west along Carlisle Street with Leichhardt LEP 2012 heritage item no. I682 outlined in red.

Figure 7: View looking east along Macauley Street towards Norton Street and view of a contributory house typically seen in the HCA, located in Macauley Street.

2.2 Site Description

The subject site is occupied by a four storey former theatre that was converted to an aged care facility resulting in extensive modifications and alterations, internally and externally. The building is in a P-shape with the primary frontage located along Norton Street and secondary frontages to Carlisle Street and a rear lane, which extends behind the adjacent Norton Street shops. The northern and southern boundaries of the side adjoin neighbouring properties. The building occupies the entire lot (2,024 sqm) and includes rear lane access along the western boundary. The building is known as Harold Hawkins Court.

The real property description for the site is Lot 4, Section 3 of Deposited Plan 328.

The Norton Street façade of the building has been heavily modified and above the awning includes a rendered and brick façade with a series of rectilinear windows. This heavily geometric façade is in contrast to the original theatre façade (Figure 24) which included arched windows and a triangular parapet, all of which has been removed. A number of windows were added at the time of remodelling. The façade below the awning, at ground floor level, includes a series of windows and entrances that have been painted over with a decorative geometric graffiti mural in greens, blues, pinks and yellows. The ground floor of the original theatre building is only accessible from two entrances on Norton Street.

The façade visible from Carlisle Street and the rear lane show the 1960s extension of the building which has been constructed from red brick and includes sections of cream brick detailing, particularly above and below the vertical windows located on the Carlisle Street façade. The veranda walkways have all been enclosed either through the use of wire fencing or a combination of windows and weatherboards.

Internally, each of the three floors of the building have a number of accommodation rooms and associated facilities that wrap around a central open courtyard area. There is also a

basement level which includes a laundry and ironing room. The main kitchen is located on the ground floor towards the Norton Street entrance.

The building has been unoccupied for a number of years and as such, is in poor condition.

The following images (Figures 8 to Figure 18) provide an overview of the building's current physical condition.

Figure 8: Views of the Norton Street façade from the eastern side of Norton Street.

Figure 9: View of the southern Carlisle Street façade and detailed view of the graffiti on the Norton Street façade below the awning.

Figure 10: View looking north along the rear laneway and internal view of a ground floor staircase.

Figure 11: Internal views of the ground floor kitchen area.

Figure 12: Ground floor views of the internal courtyard area.

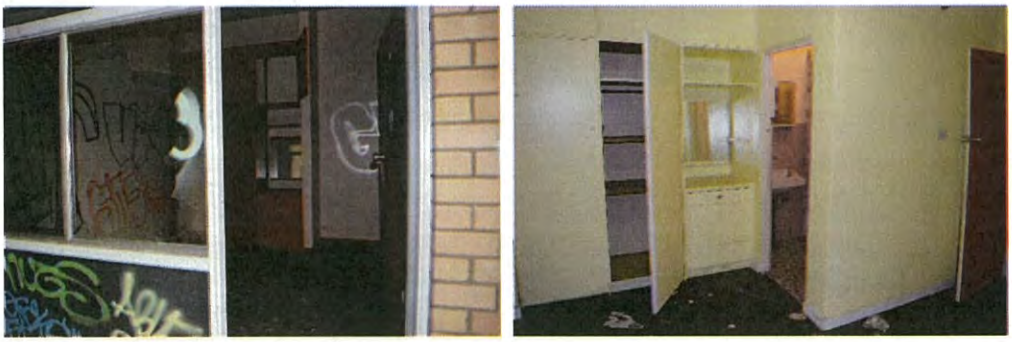

Figure 13: Views of accommodation rooms located on the ground floor and their associated amenities.

Figure 14: View of a ground floor communal area and first floor internal veranda walkway.

Figure 15: Internal views of a corridor and a room on the first floor.

Figure 16: View of the second floor veranda walkway and an accommodation room.

Figure 17: Internal views of the basement area and laundry room.

Figure 18: Internal view of the Carlisle Street extension stairwell and external view of the subject building from the corner of Macauley Street and the rear lane.

3. History

3.1 Indigenous Occupation

The land that is now known as Leichhardt was originally occupied by the Cadigal and Wangal people of the Eora Nation.

> *The 'Eora people' was the name given to the coastal Aboriginal people around Sydney. The word Eora simply means 'here' or 'from this place'. Local Aboriginal people used the word to describe to the British where they came from and so the word was then used to define the Aboriginal people themselves. The name Eora is proudly used today by the descendants of those very same people. Central Sydney is therefore often referred to as 'Eora Country'.*[2]

3.2 Brief History of Leichhardt[3]

Between the years of 1794 and 1821 a number of land grants varying in size between 16 to 270 acres, were issued within the area known today as the suburb of Leichhardt. Brothers Captain John Piper and Ensign Hugh Piper in particular were issued with a number of grants and established the two largest estates in the area. The estates were respectively named "Piperston" and "Macquarie Gift", referencing their good fortune in acquiring the grants, thanks to Governor Macquarie. In 1812 Hugh Piper returned to England and subsequently handed over power of attorney for his 270 acre grant to his brother John.

John Piper experienced financial difficulty and was forced to sell the majority of his "Piperston" estate to four purchasers; James Foster, Abraham Hearn, Prosper de Mestre and David Ramsey.

The origin of the name 'Leichhardt' derives from the renaming of John Piper's original "Piperston" estate by merchant Walter Beams when the only remaining portion of Piper's land was purchased in 1842. 'Leichhardt' was named in honour of Walter Beam's close friend and renowned Prussian naturalist Ludwig Leichhardt.[4]

After acquiring a portion of John Piper's estate, James Forster began construction of "Elswick House" in 1832. After experiencing financial difficulty, Forster was unable to complete construction of "Elswick House" and sold the estate to his employer, James Norton. At the time the estate included a number of structures including a coach house, convict barracks, kitchen, servant's quarters and stables surrounding the main two storey stone house.

Norton was a well-known man in the colony, having set up a successful legal practice in Sydney as well as being an early colonial politician. Norton died in 1862 and is noted as having lived in the house up until his death. The Norton Estate was subdivided between 1867 and 1874, including the original mansion "Elswick House" which was acquired by James Norton's son, James Norton Junior. Subdivision of the estate also resulted in the creation of Elswick and Norton Streets, along with Allen and Marion Streets which were named after his son and second wife.

Leichhardt's incorporation as a council saw an upsurge of development in the 1870s. The installation of tramways on Norton Street in 1887 contributed to the commercial strip continue to develop. Many of the properties from this era are still visible today.[5]

---

[2] Anita Heiss and Melodie- Jane Gibson, *Barani, Sydney's Aboriginal History*, accessed July 2014 from <http://www.sydneybarani.com.au/sites/aboriginal-people-and-place/>

[3] The following brief history of Leichhardt has been compiled from various sources including Pollen, Frances, The Book of Sydney Suburbs, Angus and Robertson, 1996, the State Heritage inventory form for Leichhardt Methodist Church, http://www.environment.nsw.gov.au/heritageapp/ViewHeritageItemDetails.aspx?ID=1940730, and the Leichhardt Municipal Council website, http://www.leichhardt.nsw.gov.au/Library/Local-History/Our-Suburbs/Leichhardt

[4] Ibid. P 20

[5] Ibid. P 49

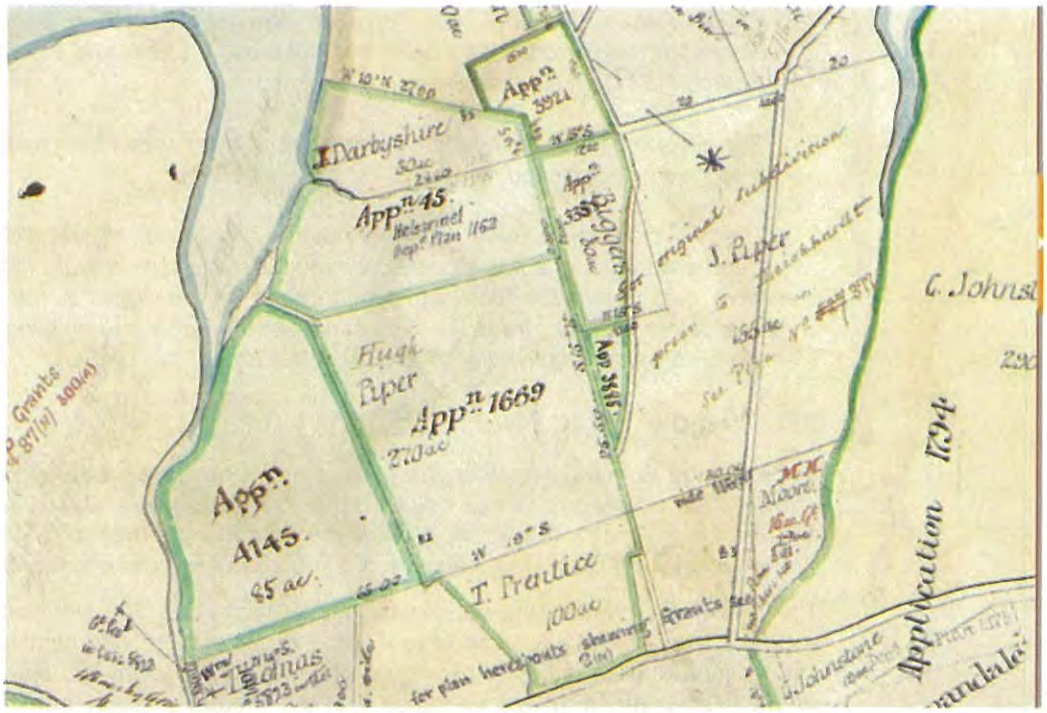

Figure 19: Undated Parish map showing Hugh Piper and John Piper's original land grants. (Source: HLRV, map no. 140729)

3.3 History of the Whaleyborough HCA

The following history of the Whaleyborough Estate Conservation Area has been extracted from the Leichhardt DCP 2012:[6]

> *This area was once part of James Norton's Elswick Estate which stretched from Parramatta Road to William Street, and from Flood Street (part) to part of Balmain/Derbyshire Roads. Its subdivision by Norton's family in 1867 into four large sections accessed by surveyor-standard one chain (66ft) wide roads at Elswick, Norton and Allen Streets, and at Short Street for access to Balmain Road, established the layout of modern Leichhardt.*
>
> *This conservation area was Section 2 (42 acres) of that Elswick Estate subdivision. In 1878 it was purchased by William Whaley Billyard who marked out eight sections of building allotments divided by four streets each one chain wide, with rear lane access for the allotments facing Norton Street. The 213 generous building allotments were 50ft-wide with depths of about 142ft, and were probably designed to attract a more affluent market than the more tightly subdivided Excelsior Estate to the south of Marion Street.*
>
> *A number of free-standing double-fronted single-storey houses were built, mostly as one dwelling, sometimes as two semis across the 50ft wide allotments. However, the greater demand for cheaper housing saw many of these generous allotments accommodating two and sometimes three terrace houses. The most elevated part of the estate, near the Marion/Norton Streets intersection, was chosen for civic and church buildings — the Blacket-designed All Souls Church, the Primitive Methodist Chapel (1883) in Cromwell Street and the police station (1885) in Marlborough Street. Other church groups also chose sites in the*

[6] Leichhardt DCP 2012, Conservation Area 3 - Whaleyborough Estate, https://www.leichhardt.nsw.gov.au/Planning--Development/Planning-Controls--DCPs--LEPs--VPAs-/Heritage/Conservation-Area-3-Whaleyborough-Estate

Whaleyborough Estate — the Salvation Army Hall (1916) in Carlisle Street the Leichhardt Masonic Lodge (1924) in Marlborough Street and the Congregational Church (1911) on Elswick Street.

The allotments with back lanes facing Norton Street were taken up for commercial premises with attached dwellings.

The PWD detail survey of inner Sydney of 1888 showed 216 brick, 24 weatherboard and a few stone buildings. Most of these remain today, and more were built during the following decade such as the single-storey single-fronted terraces in Carlisle Street. An examination of the remaining buildings suggest that the area was probably fully built upon by the end of the 1930s.

3.4 History of the Subject Site

Based on the Sands Directories, the subject site operated as a theatre from 1912 to 1960. The theatre had various names including the Alabama Picture Show, Garrick Picture Show and Marlboro Theatre (the misspelling of the name of the theatre as "Marlborough" in the Sands Directory is most likely because of the theatre's proximity to Marlborough Street).

The following table lists the various occupants located at 168 Norton Street between the years of 1890 and 1933. Apart from 1908, the subject site was continuously occupied by various individuals and their businesses. The Marlboro Theatre first appears in the directory in 1921, however, it should be noted that the theatre officially opened in June of 1920 (perhaps after the Sands Directory of 1920 was produced).[7]

Year	Occupant Identified in Sands Directory
1890	Mrs York, dressmaker
1893	Mrs York, dressmaker
1894	J Hamilton, contractor
1895	Thomas Hextell
1896	Mrs C W Bucknall
1897	Mrs C W Bucknall
1898	Mrs C W Bucknall
1899	Mrs C W Bucknall
1900	Mrs C W Bucknall
1901	Darius Wilson
1902	Mrs Ann Nathan
1903	Mrs Ann Nathan
1904	Mrs Ann Nathan
1905	Mrs Ann Nathan
1906	Mrs Ann Nathan
1907	Edward Main
1908	No listing
1909	Warren Solomon
1910	Warren Solomon

[7] Cinema Treasures Website, "Marlboro Theatre", http://cinematreasures.org/theaters/39519

1911	Mrs Annie "Alva" Wilson
1912	Michael Mulqueeney Alabama Picture Show Samuel Patterson, builder, "Alva"
1913	Hubert Sidel, carpenter Garrick Picture Show Samuel Patterson, builder, "Alva"
1914	Mrs F Krieger, confectioner William Krieger Garrick Picture Show Samuel Patterson, builder, "Alva"
1915	Mrs Poole, confectioner Garrick Picture Show Samuel Patterson, builder, "Alva"
1916	(the 1916 listing identifies the subject site as 166 instead of 168) Thomas E Farr, bootmaker Garrick Theatre Samuel Patterson, builder, "Alva" Mrs N Cannon, College of Music
1917	Frank Storum, confectioner Garrick Picture Show Mrs Nellie McDonnell, College of Music
1918	Frank Storum, confectioner Garrick Picture Show Mrs Nellie McDonnell, College of Music
1919	Mrs Mabel Storum Garrick Picture Show William Draper Mrs Nellie McDonnell, College of Music
1920	Mrs Mabel Storum Garrick Picture Show William Draper Mrs Nellie McDonnell, College of Music
1921	Henry Myers Marlborough Theatre
1922	Henry Myers Marlborough Theatre
1923	U Lamaro Marlborough Theatre
1924	Mrs C Jones Marlborough Theatre
1925	Mrs C Jones Marlborough Theatre

1926	Mrs C Jones Marlborough Theatre
1927	Wilson and Marsh, restaurant Marlborough Theatre
1928	Wilson and Marsh, restaurant Marlborough Theatre
1929	Wilson and Marsh, restaurant Marlborough Theatre
1930	Wilson and Marsh, restaurant Marlborough Theatre
1931	Wilson and Marsh, restaurant Marlborough Theatre
1932-1933	FJ McCarthy Marlborough Theatre

Limited historical information has been found to date in regards to the history of the site when it was the Alabama Picture Show (1912) and the Garrick Picture Show (1913- 1920), however, when the site began operating as the Marlboro Theatre, the theatre ran typical suburban double bills (two films for the price of one).[8] The theatre was located within a prime location, situated on busy Norton Street, and experienced popularity for a number of years before closing in July 1960, forty years after first opening.

With the arrival of CinemaScope in the 1950s, the Marlboro Theatre was adapted to include a wide screen which was considered the widest screen in the area at the time.[9] CinemaScope was a 20th Century Fox invention released on 16 September 1953 and was used up until 1967.[10] The technique involved adding a cylindrical lens over a regular camera which would project a wide picture onto the screen.[11]

The Marlboro Theatre only had one screen, but had the capacity to seat 2,200 people.[12] An internal image of the theatre can be seen in Figure 23. The Marlboro Theatre was known for screening action pictures.[13]

Following its closure in July 1960, the theatre was gutted internally, had its external decoration removed and was converted into a nursing home. The Harold Hawkins Court was officially opened in August 1964 by Dame Pattie Menzies and, at the time, was considered a state of the art facility, catering for 120 people. The name of the building, Harold Hawkins Court, pays homage to Reverend Harold Hawkins who was Reverend of the Uniting Care Church for a number of years. The site was placed on the market in 2012 and was later acquired by Uniting Care in April 2013.

The subject site was also part of the Wall2Wall Mural Competition held in 2015 by Leichhardt Municipal Council. Harold Hawkins Court was identified in the competition as Site 3 and entrants were required to design a mural for the façade under the awning on Norton Street.[14] The purpose of this competition was to promote the regeneration of Norton Street. The final product can be seen in Figure 27.

The following images provide an overview of the historical development of 168 Norton Street.

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[8] Cinema Treasures Website, "Marlboro Theatre", http://cinematreasures.org/theaters/39519
[9] Ibid
[10] National Film and Sound Archive, "Cinemascope", http://www.nfsa.gov.au/preservation/glossary/cinemascope
[11] Ibid
[12] Cinema Treasures Website, "Marlboro Theatre", http://cinematreasures.org/theaters/39519
[13] Ibid
[14] Wall2Wall Mural Competition 2015 PDF information about the three subject sites, Leichhardt Municipal Council. http://www.leichhardt.nsw.gov.au/ArticleDocuments/1408/WALL2WALLLocations2015.pdf.aspx

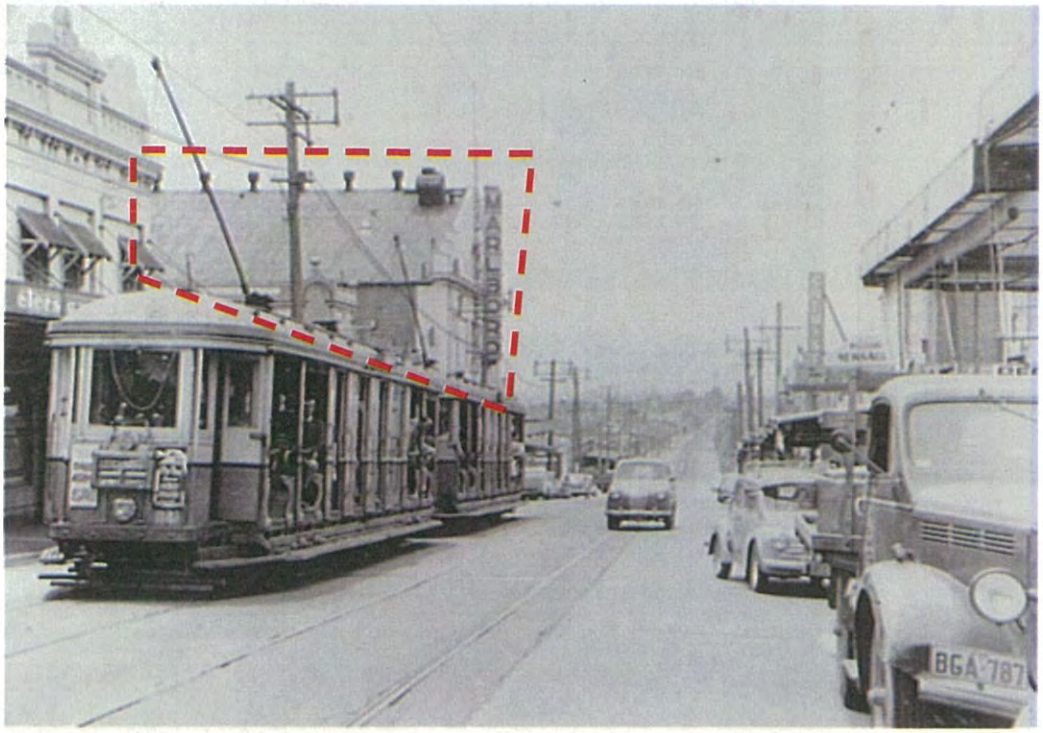

Figure 20: Photograph from c.1952 taken by Leon Manny of the tramways of Leichardt. The Marlboro Theatre appears in the background towards the left. (Source: Tramway Museum via Leichhardt Municipal Library)

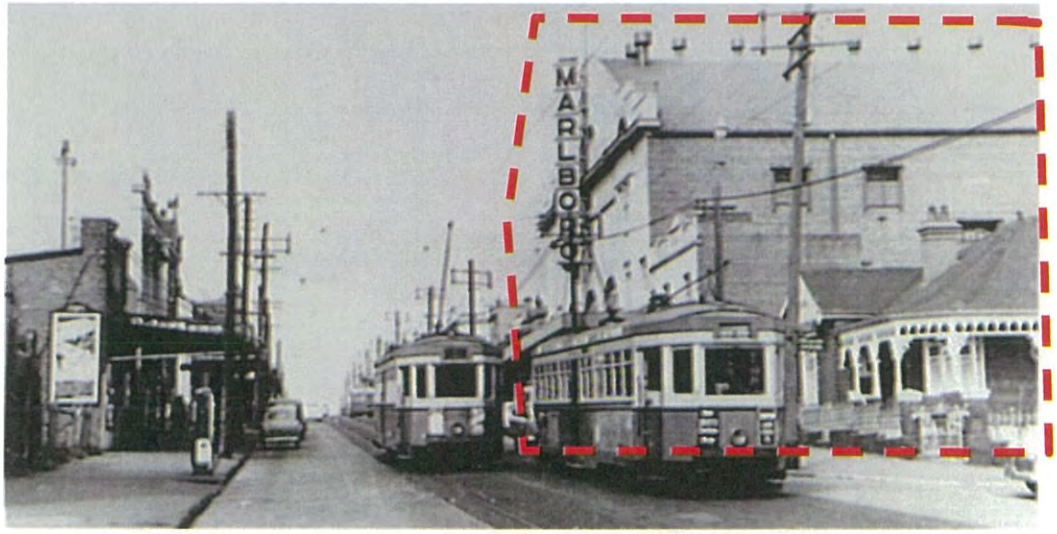

Figure 21: Photograph from c.1952 taken by Leon Manny of the tramways of Leichardt. The Marlboro Theatre appears in the background towards the right. (Source: Tramway Museum via Leichhardt Municipal Library)

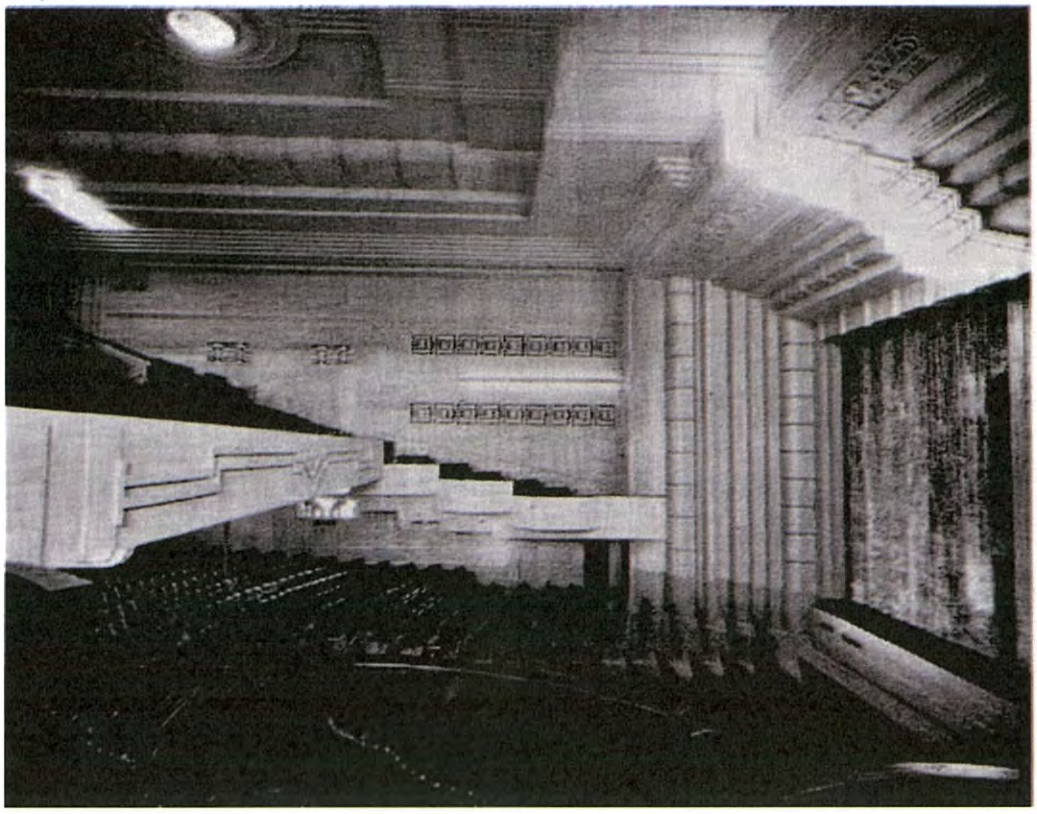

Figure 22: Photograph showing the interior of the Marlboro Theatre before conversion into an aged care facility. (Source: Cinema Treasures Website, http://cinematreasures.org/theaters/39519/photos/114291)

Went To Sleep In Theatre, Was Locked In

SYDNEY.—Rushing to the Marlboro Theatre at Leichhardt to investigate a report that there was a robber on the premises, police found that a well-known local resident had been locked in.

They released Arthur Solway, who lives only 50 yards from the theatre.

"I went to the show last night, but I must have dozed off," said Solway today.

"Next thing I knew was when I woke up. It took me five minutes to work out I was in the front stalls.

"I felt my way to the foyer, but I couldn't find a door I could open—they are padlocked from the outside.

"I was starting to get a bit worried when the police arrived.

"It was 2 a.m. when I got to bed, but I have not been able to go to sleep since."

Figure 23: Newspaper article about a man falling asleep and getting locked inside the Marlboro Theatre. (Source: Newcastle Sun, 29 January 1949, p.1)

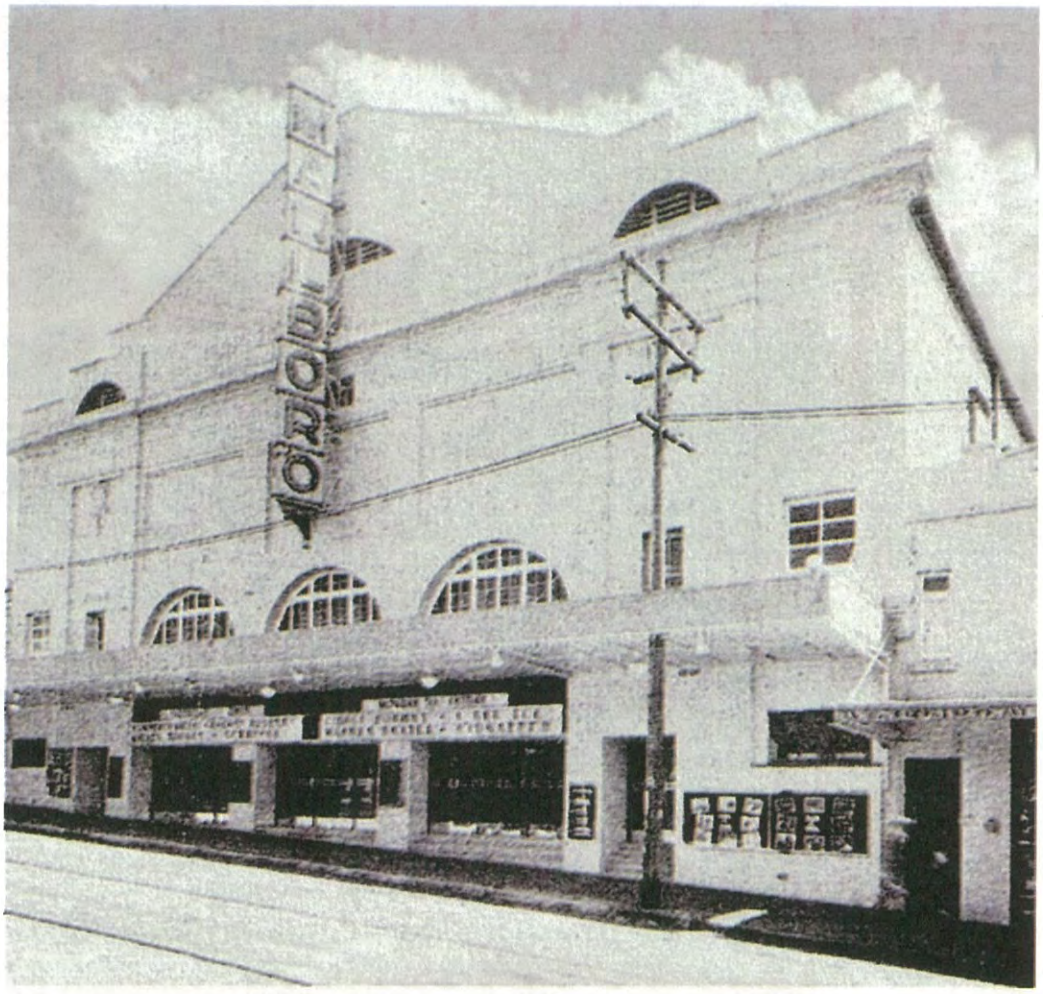

Figure 24: Undated photograph showing the exterior of the Marlboro Theatre before conversion into an aged care facility. (Source: Cinema Treasures Website, http://cinematreasures.org/theaters/39519/photos/114291)

Figure 25: Plaque located internally commemorating the opening of the Harold Hawkins Court.

Figure 26: 1943 aerial view showing the subject site, outlined in red. The Marlboro Theatre is clearly visible in this image as a dominating element within the Norton Street streetscape. The Carlisle Street extension is not present, however, two terrace houses can be seen there in this image. (Source: SIX Maps 2016)

Figure 27: Photograph from October 2015 showing the mural painted under the awning of the Harold Hawkins Court as part of the Wall2Wall mural competition run by Leichhardt Municipal Council. (Source: The INFP Blog, "Urban Revitalisation" post from 31 October 2015, https://theinfp.com/2015/10/)

As indicated in the Sands Directories, various other small businesses were identified as operating at 168 Norton Street as well as the theatre. In particular, between the years of 1916 and 1920 a College of Music operated from the subject site under the supervision of Mrs Nellie McDonnell. A Mrs N Cannon is identified in association with the school in 1916, however, this Sands Directory entry is most likely incorrect as historical research has indicated that Mrs Nellie McDonnell had been running the College for a number of years prior to its relocation to Norton Street. A newspaper article from 26 December 1907 indicates that the College was previously located at 3339 Parramatta Road in Leichhardt (Figure 29).

Mrs Nellie McDonnell's school is frequently mentioned in various newspaper articles between 1907 and 1933. These articles are predominately concerned with reporting on the various concerts held by her school, achievements of her students, along with fundraisers held by the school in aid of St Fiacre Church.[15] As such, while the school moved from 168 Norton Street to another location after 1920, it appears the school continued to operate well into the 1930s.

The Glebe Society has identified the full name of Nellie McDonnell's school as the Oberon College of Music, however, this appears to be the only reference to the school being named as such.[16]

Between the years of 1912 and 1916, local builder, John Patterson, is identified as residing at 168 Norton Street. Patterson was a prolific land owner in the Leichhardt area, having acquired various allotments including a property along Francis Street (1904) which he sold to Heine and Son, a light industrial firm, in August 1914.[17] Patterson was also responsible for the construction of various buildings during the early 20th century. According to the AIF Project run by the University of New South Wales, Patterson was enlisted on 6 September 1915 and served as a Private in the 1st Battalion, 12th Reinforcement, returning to Australia on 27 September 1917 (Figure 30).[18]

The following newspaper articles provide some insight into Nellie McDonnel's College and John Patterson.

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[15] The Catholic Press, 6 November 1919, p.17 and The Sydney Morning Herald, 13 March 1920, p.15

[16] The Glebe Society inc., "Who Lived in Your Street: Una Irene and Edna Marjory Moncrieff", http://www.glebesociety.org.au/wordpress/?street=una-irene-and-edna-marjory-moncrieff

[17] Leichhardt Historical Journal, "Further Purchases in the 1867 Elswick Estate Subdivision," no.16, p.39

[18] The AIF Project, "Samuel Patterson", University of New South Wales, https://www.aif.adfa.edu.au/showPerson?pid=235641

MISS NELLIE McDONNELL'S PUPILS' SUCCESSES.

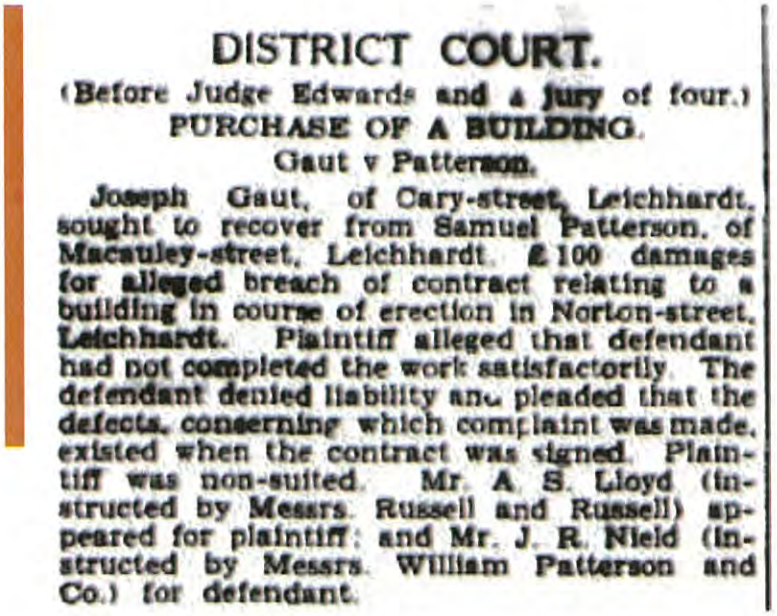
Miss Nellie McDonnell, of 339 Parramatta-road, Leichhardt, has had a record year, having passed 51 pupils through the practical and theoretical examinations at the various colleges. Miss Gertie Cregan gained the highest marks in the Licentiate Degree for the yearly examinations, in connection with the London College of Music, and was awarded the medal. At the examinations of the London College of Music held recently, 13 pupils presented themselves on December 13 for pianoforte playing, and all passed successfully, with high marks. Miss Hilda Hadley passed the Teacher's Diploma with 92 marks. This is the highest practical diploma of the college, which entitles this young lady to wear the teacher's hood, and append the letters T.D.L.C.M. after her name. Miss Hadley is only 17 years of age, about the youngest in the State to obtain this diploma. Miss Josephine Herlihy passed the Associate Diploma. Three other Associates passed, namely: Rene Bestard, A.L.C.M., 88 marks; Blanche Moody, A.L.C.M., 85; and Miss Anderson, A.L.C.M., 85. In the senior grade Kathleen O'Connor, Gracie O'Farrell, Kathleen Osborne and Amy Carruthers passed; in the intermediate grade Dorothy Williams and Edwin Lillie; and in the primary grade Rita Ellis and Doris Millwood. At the Sydney College of Music examinations in November, four pupils passed the junior grade with honours, viz.: Queenie Machan, 96 marks; Gracie O'Farrell, 99; Amy Carruthers, 90; and Doris Greatorex, 96. In June last 14 passed practical, including three Licentiates and two Associates, and 21 for theory.

Figure 28: Newspaper article reporting on the success of Nellie McDonnell's pupils. The article also indicates the College was previously located at 339 Parramatta Road before moving to 168 Norton Street. (Source: The Catholic Press, 26 December 1907, p.4)

MISS NELLIE McDONNELL'S PUPILS' CONCERT.

On the 6th inst., in the Leichhardt Town Hall, the pupils of Miss Nellie McDonnell gave their annual concert, assisted by Misses Hilda Lane, Edith Williams, and the Leichhardt Amateur Orchestra. This concert was remarkable for a fine exhibition of musical knowledge and execution. The pupils, by their manner of playing, showed that they had intelligently taken advantage of capable and artistic teaching. The audience, which taxed the capacity of the Town Hall to its utmost, showed its appreciation of the various items by much applause. The concert opened with the "Soldiers' Chorus" from "Faust," sung by the students. Pianoforte solos were rendered in artistic style by Misses Nellie McDonnell, Hilda Hadley, TND.L.C.M., Gertie Corcoran, L.L.C.M., Stella Gillard, L.L.C.M., Josie Herlihy, A.L.C.M., Molly Geelan, A.L.C.M., Beatrice Woods, A.L.C.M., Hilda Searle, A.L.C.M., Blanche Moody, A.L.C.M., Rene Bestard, A.L.C.M., Ruby Cheal, A.L.C.M., Ruby Gladdle, Evy Agnew, Dorothy Greatorex, and Nellie Newby. The piano trios (performed on two pianos) were "Il Baen" (Ardill), Misses Dorothy Hawkins, Dorothy Williams, Hazel O'Connor, Amy Carruthers, Nellie McGovern, and Master Eddie Lillie; "Flambeau March" (S. Clark), Misses Kathleen O'Connor, Gracie O'Farrell, Kathleen Osborn, Florrie Harradine, Molly Bierne, and N. McDonnell. Piano duets, Galop (Blake), Miss Mary and Master Edie Hannan; "La Chatelaine," Misses Violet Heckenberg, Mattie Pearce, and Masters Harold and Leslie Ritchie. Violin items were rendered by Misses Annie Riddle, A.L.C.M., and Molly Smith, A.L.C.M. A feature in the programme was a piano trio (march from "Norma"), by six performers on two pianos, with full orchestral accompaniment. The concert was closed with the singing by the pupils of "Auld Lang Syne."

Figure 29: Newspaper article providing information about a concert performed by Nellie McDonnell's students. (Source: The Catholic Press, 16 April 1908, p.19)



DISTRICT COURT.

(Before Judge Edwards and a jury of four.)

PURCHASE OF A BUILDING.

Gaut v Patterson.

Joseph Gaut, of Cary-street, Leichhardt, sought to recover from Samuel Patterson, of Macauley-street, Leichhardt, £100 damages for alleged breach of contract relating to a building in course of erection in Norton-street, Leichhardt. Plaintiff alleged that defendant had not completed the work satisfactorily. The defendant denied liability and pleaded that the defects concerning which complaint was made, existed when the contract was signed. Plaintiff was non-suited. Mr. A. S. Lloyd (instructed by Messrs. Russell and Russell) appeared for plaintiff; and Mr. J. R. Nield (instructed by Messrs. William Patterson and Co.) for defendant.

Figure 30: Newspaper article detailing a court case held over a dispute between Joseph Gaut and Samuel Patterson. (Source: Sydney Morning Herald, 16 June 1931, p.5)

4. Assessment of Significance

4.1 Assessment of Criteria

The following assessment of significance has been prepared in accordance with the 'Assessing Heritage Significance' guidelines from the NSW Heritage Manual.

a) an item is important in the course, or pattern, of the local area's cultural or natural history

The subject site is located among a group of buildings that are illustrative of the commercial development of Norton Street between the late 19th and early 20th centuries in response to the suburban growth of Leichhardt. As a large theatre site it demonstrates the increasing importance of Norton Street to the growing suburb.

b) an item has strong or special associations with the life or works of a person, or group of persons, of importance in the local area's cultural or natural history

The subject site is associated with local businesses such as Mrs Nellie McDonnell's College of Music, local builder John Patterson, however, these associations are considered secondary and do not specifically relate to the existing building. Likewise, while the building is called "Harold Hawkins Court", the subject site does not have any strong or special associations with the Uniting minister after whom it was named.

c) an item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in the local area

While the subject building is a typical example of a 1960s aged care facility and does not have any architectural characteristics of note. The site has been substantially altered and therefore there are no features remaining of the original Marlboro Theatre. The building is considered to negatively impact on the streetscape of Norton Street and the Whaleyborough Estate HCA.

d) an item has strong or special association with a particular community or cultural group in the local area for social, cultural or spiritual reasons

The subject site is associated with the local Leichhardt community as the former site of the Marlboro Theatre and Mrs Nellie McDonnell's College of Music. However, no

physical evidence remains of the college and the building does not readily appear as a former theatre. The site has a strong association with Uniting Care as the former site of an aged care facility run by the organisation.

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

The subject site has some potential to yield information that will contribute to an understanding of the local area's cultural or natural history.

f) an item possesses uncommon, rare or endangered aspects of the local area's cultural or natural history

The subject site does not feature any known uncommon, rare or endangered aspects of the area's cultural or natural history.

g) an item is important in demonstrating the principal characteristics of a class of the local area's

- ***cultural or natural places; or***

  cultural or natural environments

The subject site is indicative of the commercial growth of Norton Street during the late 19th and early 20th centuries and the subsequent need during the 1960s for aged care facilities within the area. The building has been significantly altered internally and externally which has reduced the integrity of the building.

4.2 Statement of Significance

The existing building located at 168 Norton Street is located within a group of commercial buildings built during the late 19th and early 20th centuries. The subject site is indicative of the suburban growth of Leichhardt and the subsequent commercial development of Norton Street. The site is also indicative of the growing need during the 1960s for aged care facilities in the area.

The building has been substantially modified internally and externally and is uncharacteristic within existing aesthetics of the Norton Street streetscape and the Whaleyborough HCA.

The subject site is not considered of sufficient significance to warrant individual listing as a heritage item in the Leichhardt LEP 2012.

4.3 Statement of Significance for the Whaleyborough Estate HCA

The following Statement of Significance has been extracted from the Leichhardt DCP 2012:[19]

> *One of a number of conservation areas which collectively illustrate the nature of Sydney's early suburbs and Leichhardt's suburban growth particularly between 1871 and 1891, with pockets of infill up to the end of the 1930s (ie prior to World War II). This area is significant for its surviving development from the 1880s and 1890s, which gives it its particular identity. All allotments appear to have been taken up and built upon probably by the late 1930s.*
>
> *Through its wide roads, its important mixture of cottages, terraces and shops, mostly dating from the 1880s–1890s, and the form and materials of its construction this area provides an interesting built example of late nineteenth century economics where pressures for denser and cheaper accommodation have overlaid the original spacious suburban intentions.*

[19] Leichhardt DCP 2012, Conservation Area 3 - Whaleyborough Estate, https://www.leichhardt.nsw.gov.au/Planning---Development/Planning-Controls--DCPs--LEPs--VPAs-/Heritage/Conservation-Area-3-Whaleyborough-Estate

With the adjoining Excelsior Estate subdivision to the south, its roads, lanes and subdivision pattern defined the layout of central Leichhardt.

It demonstrates through its range of external finishes (first plaster, then brown face brick and blue-face brick) the increasing sophistication in brick making from the 1880s.

5. The Proposal

The proposal is for a change in the proscribed building envelope for the subject site. This is to facilitate the future development of the site which will require the demolition of the existing building. As such, a concept plan has also been created to illustrate the possibilities for the proposed new building envelopes. The proposal includes the following:

Level 0:

- Car parking accessible from the rear lane

Level 1:

- Retail at ground floor level facing Norton Street
- Residences towards the rear with a balcony;

Levels 2-4:

- Various 1 bed and 2 bed spaces with external circulation areas;
- Residences towards the rear lane with a balcony;

Level 5:

- Various 1 bed and 2 bed spaces with varying setbacks.

Preliminary drawings have been designed by Young Metcalf Architects to visualise the proposed change in the site's building envelope (accounting for 47 accommodation rooms). The following drawings (dated 2 June 2016) were consulted during production of this report:

- Level 0 - Option 8, SK.03, revision B;
- Level 1 - Street Level - Option 8, SK.04, revision B;
- Level 2 - Option 8, SK.05, revision B;
- Level 3 - Option 8, SK.06, revision A;
- Level 4 - Option 8, SK.07, revision B;
- Level 5 - Option 8, SK.08, revision B;
- Cover Sheet, SK.01, revision A;
- 3D Views with Building Envelope, SK.02, revision A.

For specific details reference should be made to the submitted architectural plans.

6. Heritage Impact Assessment

The controls contained within the Leichhardt LEP 2012 and the Leichhardt DCP 2012 pertain predominately to physical works only and do not concern building envelopes specifically. Therefore, only a general discussion of the likely impacts of the proposed new building envelopes has been provided at this stage. A detailed assessment of any future works will be undertaken at the DA stage to assist Leichhardt Municipal Council (inner West Council) in its assessment of the physical works.

As detailed in Section 1.1, 168 Norton Street is not identified as a heritage item but is located within the Whaley Borough Heritage Conservation Area (HCA) (C13) as identified under Schedule 5 of the Leichhardt Local Environment Plan (LEP) 2013. The site is also located within proximity to the Wetherill Estate HCA (C14) and heritage item "Royal Hotel, including interiors" located at 156 Norton Street (item no. I682).

In general, the proposed new building envelope is deemed acceptable from a heritage perspective as the architects have thoughtfully considered the heritage significance of the HCA and heritage items located in proximity. No physical works are proposed at this stage with the proposal being limited to the redefining of building envelopes for the site. The proposed new building envelopes will allow for a larger scale development, however, takes into consideration the heritage context with the gradual increase in setbacks assisting in providing articulation to any new development. This in turn will reduce the bulk of any future development, preventing the development from being imposing. It respects the scale and form of the traditional commercial streetscape of Norton Street and the surrounding residential streetscapes.

Retention of the existing building and adaptive reuse is not considered a viable option due to its poor condition. It is also not considered of sufficient significance to warrant retention and it is found to be an uncharacteristic element within the streetscape of Norton Street and Carlisle Street. As such, its replacement with a contemporary designed facility that takes into consideration the site's proximity to heritage items and location within an HCA, would benefit the area. The proposed new building envelopes will enable the future development to be of more functional and usable space which is much needed in order to cater for the increased demand of aged care facilities in the locality.

7. Conclusion and Recommendations

In conclusion, it is considered by City Plan Heritage that the proposal, including the redefining of the building envelopes at 168 Norton Street and concept scheme, will have no adverse impact on the significance of heritage items located in proximity and the HCA. The proposed new building envelope seeks to enable the future development of the site while also ensuring the heritage context of the site is retained. The site has been carefully considered and the proposed envelopes have been carefully established so as not to impact on the site's heritage context. The proposal demonstrates compliance with the existing controls regarding heritage conservation and is therefore recommended to Council for approval with the following recommendations:

- An archival recording should be conducted to record the Harold Hawkins building should demolition be proposed in the future;
- Any new development should in include heritage interpretation that explores the history of the site as a former cinema/theatre; and
- A separate Heritage Impact Statement will be required for any future proposed development of the site.

CITY PLAN HERITAGE

July 2016

ATTACHMENT 2 PROPONENT'S PLANNING PROPOSAL

THE UNITING CHURCH IN AUSTRALIA
PROPERTY TRUST (NSW)

TRAFFIC REPORT FOR PLANNING PROPOSAL FOR PROPOSED MIXED USE SENIORS LIVING DEVELOPMENT, 168 NORTON STREET, LEICHHARDT

OCTOBER 2016

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TABLE OF CONTENTS

1. INTRODUCTION

1.1 Colston Budd Rogers and Kafes Pty Ltd has been commissioned by The Uniting Church in Australia Property Trust (NSW) to prepare a report examining the traffic and parking implications of a planning proposal for a mixed use seniors living development at 168 Norton Street, Leichhardt. The site of the proposed development is shown in Figure 1.

1.2 The site is occupied by a former aged care facility (Harold Hawkins Court), which is disused. It has frontage to Norton Street, Carlisle Street and a laneway at the rear.

1.3 The planning proposal would provide for a scale of development comprising 44 independent living units and ground floor retail/commercial uses of some 602m^2. Vehicular access would be provided via the laneway at the rear.

1.4 This report assesses the traffic and parking implications of the proposed development through the following chapters:

- Chapter 2 - describing the existing conditions; and
- Chapter 3 - assessing the traffic and parking implications of the proposed development.

2. EXISTING CONDITIONS

Site Location and Road Network

2.1 The site of the proposed development is at 168 Norton Street, Leichhardt, as shown in Figure 1. It is occupied by a former aged care facility (Harold Hawkins Court), which is disused. The site has frontage to Norton Street, Carlisle Street and a laneway at the rear. Vehicular access to the site is provided from the laneway.

2.2 Surrounding land use is a mix of commercial, retail and residential uses in the Leichhardt town centre.

2.3 The road network in the vicinity of the site includes Norton Street, Carlisle Street Macauley Street and the laneway on the western side of the site. Norton Street is the main north-south street through the town centre, connecting Lilyfield Road and the City West Link in the north with Parramatta Road in the south. In the vicinity of the site it provides for one traffic lane and one parking lane in each direction, clear of intersections. There are bus stops on both sides of the road, adjacent to the site. There is a pedestrian crossing south of the site. Norton Street has a 40 kilometre per hour speed limit, being in an area of high pedestrian activity.

2.4 Carlisle Street is south of the site. It connects to Norton Street at an unsignalised t-intersection, with all turns permitted. It provides for one traffic lane and one parking lane in each direction, clear of intersections. It is marked as a bicycle route in both directions. Carlisle Street provides access to residential properties, as well as some commercial properties close to Norton Street.

2.5 Macauley Street is north of the site. It is one-way eastbound toward Norton Street, and has an unsignalised t-intersection with Norton Street. It provides for one traffic lane, with parallel and angle parking on the northern and southern sides of the road respectively.

2.6 There is a laneway on the western side of the site, which connects Carlisle Street with Macauley Street. It provides access to the rear of properties fronting these streets and Norton Street. The laneway provides one traffic lane.

Traffic Flows

2.7 Traffic generated by the proposed development will have its greatest effects during weekday morning and afternoon periods when it combines with other traffic on the surrounding road network.

2.8 In order to gauge traffic conditions, counts were undertaken at these times at the following intersections:

- Norton Street/Carlisle Street;
- Carlisle Street/laneway; and
- Macauley Street/laneway.

2.9 The results of the surveys are shown in Figures 2 and 3, and summarised in Table 2.1. Norton Street carried traffic flows of some 665 to 815 vehicles per hour two-way during the surveyed peak hours. Carlisle Street and Macauley Street carried lower flows of some 10 to 180 vehicles per hour two-way. The laneway carried low flows of five to 10 vehicles per hour two-way during the surveyed peak hours.

Table 2.1: Existing two-way (sum of both directions) peak hour traffic flows			
Road	**Location**	**AM peak hour**	**PM peak hour**
Norton Street	North of Carlisle Street	665	750
	South of Carlisle Street	745	815
Carlisle Street	West of Norton Street	120	175
	West of laneway	120	180
Macauley Street	East of laneway	15	15
	West of laneway	10	10
Laneway	North of Carlisle Street	-	10
	South of Macauley Street	5	10

Intersection Operations

2.10 The capacity of the road network is largely determined by the capacity of its intersections to cater for peak period traffic flows. The surveyed intersections have been analysed using the SIDRA program for the traffic flows shown in Figures 2 and 3.

2.11 SIDRA simulates the operations of intersections to provide a number of performance measures. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS):

- For traffic signals, the average delay per vehicle in seconds is calculated as delay/(all vehicles), for roundabouts the average delay per vehicle in seconds is selected for the movement with the highest average delay per vehicle, equivalent to the following LOS:

0 to 14	=	"A"	Good
15 to 28	=	"B"	Good with minimal delays and spare capacity
29 to 42	=	"C"	Satisfactory with spare capacity
43 to 56	=	"D"	Satisfactory but operating near capacity
57 to 70	=	"E"	At capacity and incidents will cause excessive delays. Roundabouts require other control mode.
>70	=	"F"	Unsatisfactory and requires additional capacity

ρ For give way and stop signs, the average delay per vehicle in seconds is selected from the movement with the highest average delay per vehicle, equivalent to following LOS:

0 to 14	=	"A"	Good
15 to 28	=	"B"	Acceptable delays and spare capacity
29 to 42	=	"C"	Satisfactory but accident study required
43 to 56	=	"D"	Near capacity and accident study required
57 to 70	=	"E"	At capacity and requires other control mode
>70	=	"F"	Unsatisfactory and requires other control mode

2.12 It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service A, except one which is at level of service E, may not necessarily define the intersection level of service as E if that movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

2.13 The analysis found that the unsignalised intersection of Norton Street with Carlisle Street is operating with average delays for all movements of less than 15 seconds per vehicle during weekday peak periods. This represents level of service A/B, a good level of service.

2.14 The unsignalised intersections of the laneway with Carlisle Street and Macauley Street are operating with average delays for all movements of less than 15 seconds per vehicle during peak periods. This represents level of service A/B, a good level of service.

Public Transport

2.15 Local bus services are provided by Sydney Buses. As previously discussed, buses operate along Norton Street and there are bus stops adjacent to the site. Services also operate along Marion Street, south of the site. Services include:

- route 370: Leichhardt, Glebe, Newtown, UNSW, Coogee;
- route 436: Chiswick, Rodd Point, Leichhardt, city;
- route 438: Abbotsford, Leichhardt, city;
- route 439: Mortlake, Leichhardt, city; and
- route 440: Bronte, Bondi Junction, Central, Leichhardt, Rozelle;
- route 444: Campsie, Leichhardt, Balmain East Wharf;
- route 445: Campsie, Leichhardt, Lilyfield light rail, Balmain East Wharf;
- route L37: Haberfield, Rozelle, city;
- route M10: Maroubra Junction, Anzac Parade, city, Parramatta Road, Leichhardt.

2.16 The site is therefore well located to public transport services.

3. IMPLICATIONS OF PROPOSED DEVELOPMENT

3.1 The planning proposal would provide for a scale of development comprising 44 independent living units and ground floor retail/commercial uses of some 602m^2. Vehicular access to on site parking would be provided from the laneway on the western side of the site. This chapter assesses the implications of the proposed development through the following sections:

- public transport;
- parking provision;
- access, servicing and internal layout;
- traffic generation and effects; and
- summary.

Public Transport

3.2 As previously discussed in Chapter 2, buses currently use Norton Street and Marion Street, close to the site.

3.3 The proposed development will provide increased residential densities close to public transport and will strengthen the demand for these services.

3.4 The proposed development is therefore consistent with government objectives and the planning principles of:

(a) improving accessibility to employment and services by walking, cycling, and public transport;

(b) improving the choice of transport and reducing dependence solely on cars for travel purposes;

(c) moderating growth in the demand for travel and the distances travelled, especially by car; and

(d) supporting the efficient and viable operation of public transport services.

Parking Provision

3.5 The Housing for Seniors SEPP indicates that development can not be refused on parking grounds if the development provides one parking space per five dwellings (when the applicant is a social housing provider, such as Uniting).

3.6 The Leichhardt DCP 2013 includes the following parking requirements for development:

- maximum and minimum of one space per 60m^2 and 100m^2 for business premises;
- maximum and minimum of one space per 80m^2 and 100m^2 for office premises;
- maximum and minimum of one space per 50m^2 and 80m^2 for restaurants and cafés. The first 50m^2 is exempt from parking provision if the development is on a 'recognised shopping street', such as Norton Street;
- one space per 50m^2 for shops. The first 50m^2 is exempt from parking provision if the development is on a 'recognised shopping street', such as Norton Street; and

- one space per 100m^2 for take away food and drink premises. The first 50m^2 is exempt from parking provision if the development is on a 'recognised shopping street', such as Norton Street.

3.7 On this basis, the proposed development could provide:

- some nine residential spaces; and

- some six to 12 non-residential spaces. As noted above, the non-residential parking provision may be lower due to the exemption from parking for the first 50m^2 for certain uses. This will depend on the final use(s) for the non-residential component.

3.8 The development will provide parking in accordance with the above requirements. Final parking provision will be determined in association with the future development application. Disabled, bicycle and motorcycle parking will also be provided in accordance with the DCP requirements.

Access, Servicing and Internal Layout

3.9 Vehicular access would be provided from the laneway on the western side of the site. The driveway would provide access to the parking area for residents and the non-residential component.

3.10 Residential parking spaces will be a minimum of 5.4 metres long by 2.4 metres wide, with a 2.4 metre wide adjacent area for wheelchairs. Non-residential spaces will be a minimum of 2.5 metres wide. Spaces with adjacent obstructions will be 0.3 metres wider to provide for doors to open. Circulation aisles will be

5.8 metres wide. Columns will be set back 750mm from the front of spaces. Height clearance will be 2.5 metres above residential spaces, and 2.2 metres elsewhere. These dimensions are considered appropriate, being in accordance with the Australian Standard for Parking Facilities (Part 1: Off-street car parking and Part 6: Off-street parking for people with disabilities), AS 2890.1:2004 and AS 2890.6:2009.

3.11 Provision for vans and courier-sized vehicles will be included in the development. These will comprise the majority of service vehicles to the site, including maintenance vehicles and deliveries to the non-residential component.

Traffic Generation and Effects

3.12 Traffic generated by the proposed seniors living mixed use development will have its greatest effects during weekday peak periods when it combines with other traffic on the surrounding road network.

3.13 Surveys undertaken by RMS have found traffic generation of some 0.1 to 0.2 vehicles per seniors living dwelling per hour during weekday peak hours. For the non-residential component, we have assessed a generation of two vehicles per hour per parking space.

3.14 On this basis, the proposed development would have a traffic generation of some 20 to 30 vehicles per hour two-way during weekday peak periods. This is a low generation.

3.15 Such a low generation would not have noticeable effects on the operation of the surrounding road network. Intersections would continue to operate at their existing good levels of service, with similar average delays per vehicle.

3.16 The project architect has advised that the additional floor space being sought in association with the planning proposal (of 3:1 FSR, compared to that permitted under the existing planning controls of 1.5:1) is equivalent to 25 independent living units. These units would have a peak hour traffic generation of some five vehicles per hour two-way at peak times.

3.17 This is a minor additional traffic generation which would not be noticeable on the surrounding road network.

Summary

3.18 In summary, the main points relating to the traffic implications of the proposed development are as follows:

i) the planning proposal would provide for a scale of development comprising 44 seniors living dwellings and some 602m^2 non-residential uses;

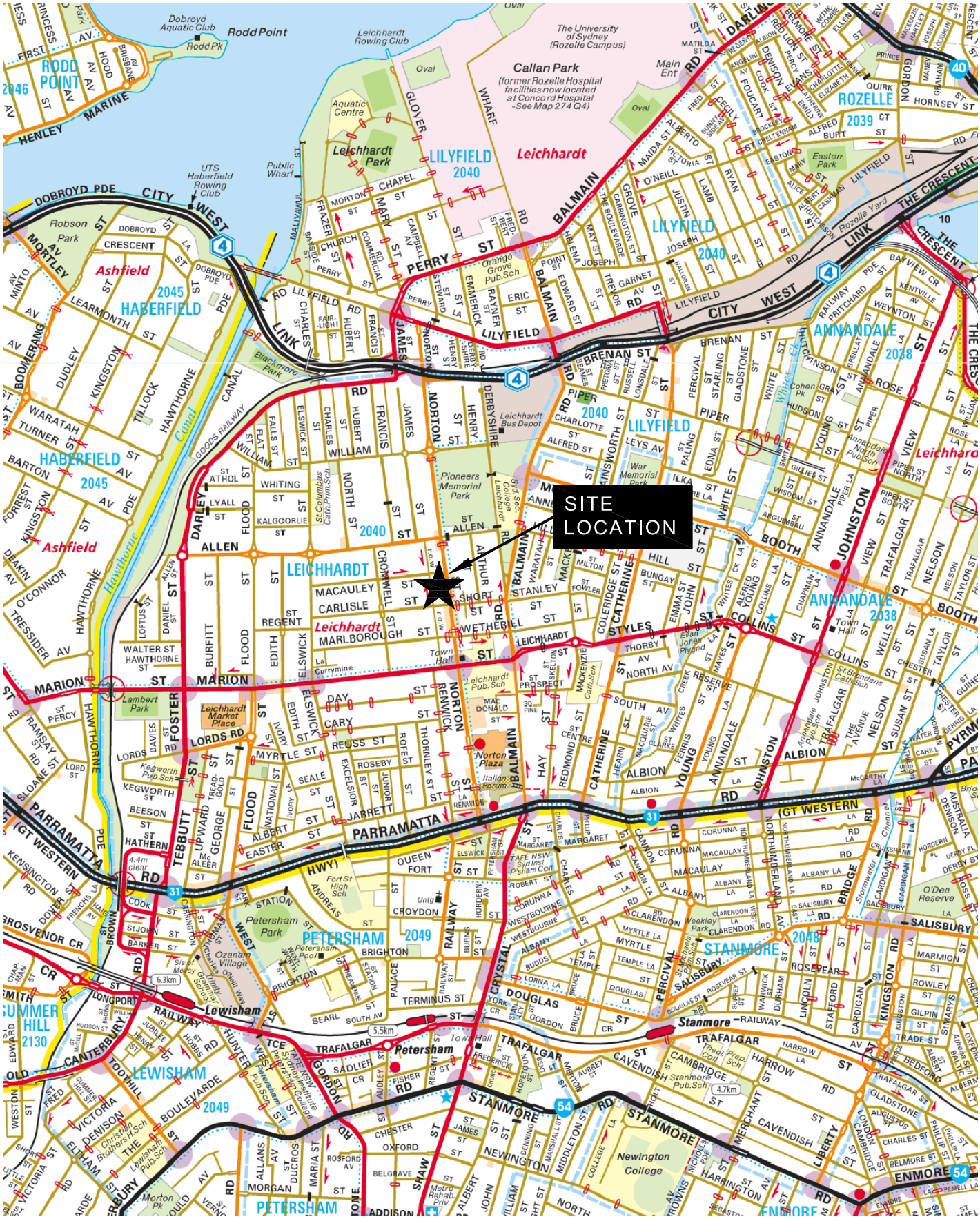
ii) the proposed development will be readily accessible by public transport;

iii) parking provision will be appropriate;

iv) vehicular access, internal circulation and layout will be provided in accordance with AS 2890.1:2004;

v) the road network will be able to cater for the traffic generation of the proposed development; and

vi) the traffic effects of the additional floor space being sought in the planning proposal would not be noticeable on the surrounding road network.

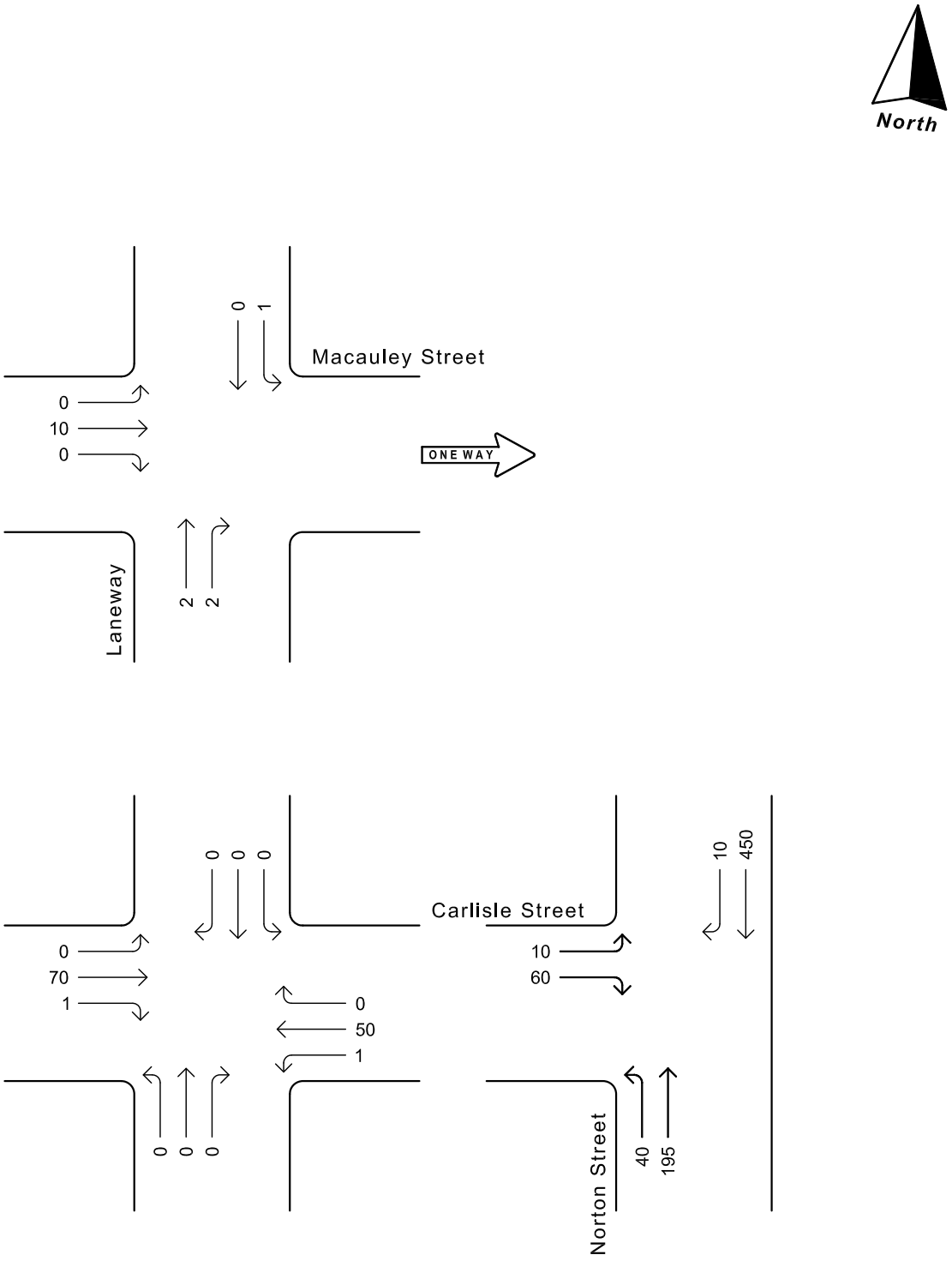


Location Plan

Colston Budd Rogers & Kafes Pty Ltd

DRAWN BY CBRK Pty Ltd_hs Ref: 10272 11.08.2016

Figure 1

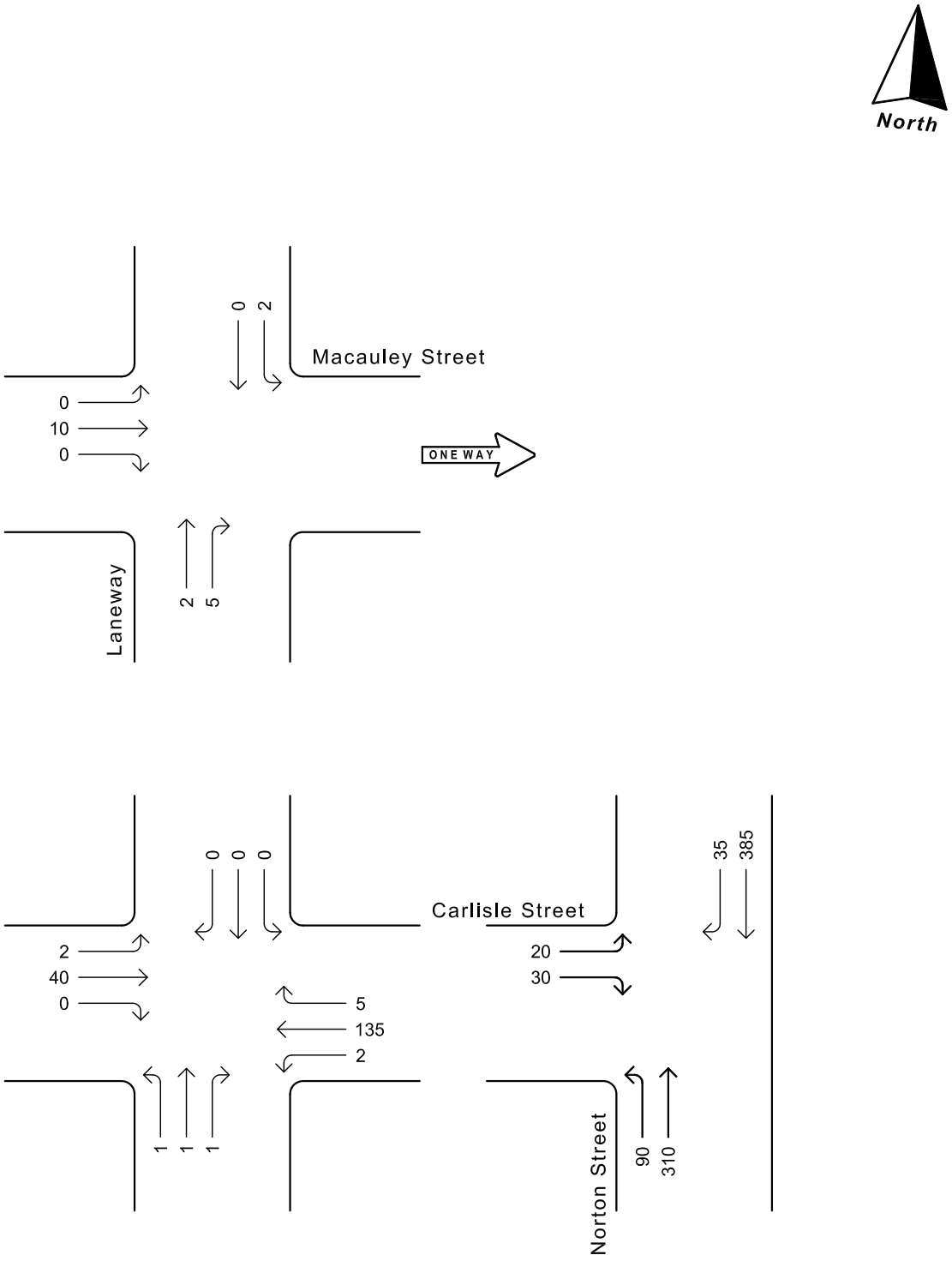


Existing weekday morning peak hour traffic flows

Colston Budd Rogers & Kafes Pty Ltd

DRAWN BY CBRK Pty Ltd_hs Ref: 10272 11.08.2016

Figure 2



Existing weekday afternoon peak hour traffic flows

Colston Budd Rogers & Kafes Pty Ltd

DRAWN BY CBRK Pty Ltd_hs Ref: 10272 11.08.2016

Figure 3

3rd November 2016

Inner West Council
Leichhardt Service Centre
7-15 Wetherill Street
Leichhardt NSW 2040

DRAFT PUBLIC BENEFIT OFFER

This Draft Public Benefit Offer (PBO) offers a contribution to accompany a Planning Proposal dated November 2016 for the property located at 168 Norton Street, Leichhardt. The components of the contribution are in accordance with the Memorandum of Understand between the former Leichhardt Council and Uniting (dated 5 march 2015) as follows:

1. Provision of 15% affordable housing or housing for those on lower income levels; and
2. Activation of the property's Norton Street elevation through the provision of non-residential land uses.

It is intended that the benefits under the offer do not include development contributions under section 94 of the *Environmental Planning and Assessment Act, 1979*.

It is intended that should development consent for the future Concept DA be granted, this offer will be confirmed in a Voluntary Planning Agreement with Council. The agreement will comply with the requirements of the *Environmental Planning and Assessment Act, 1979* and Regulations and, under the agreement, the owner of the land will acknowledge that the issue of an occupation certificate will be made conditional on the proposed works above being completed.

Yours faithfully,

Simon Furness
Director of Property

Head Office
ABN 78722 539 923
Level 4 / 222 Pitt Street
Sydney NSW 2000
PO Box A2178

Sydney South NSW 1235
T 1800 864 846
E ask@uniting.org

Draft Development Control Plan – 168 Norton Street, Leichhardt

SECTION 9 – NO. 168 NORTON STREET LEICHHARDT

Relationship to other plans

The following site specific controls apply to 168 Norton Street, Leichhardt.

Unless otherwise stated all development should be designed and constructed in accordance with the controls in this section and the provisions of this plan.

In the event of an inconsistency between this section and the remaining provisions of this DCP, the controls in this section shall prevail in relation to development on the site to the extent of the inconsistency.

Map Reference

Refer to Area X on the map in *Figure G1 – Site Specific Areas*.

10.1 LAND TO WHICH THIS SECTION APPLIES

The site is known as 168 Norton Street Street Leichardt being Lot 1 DP 1119151, Lot 2 DP 1119151, Lot 1 DP 963000, Lot 3 Section 3 DP 328, Lot 4 Section 3 DP 328 (herein referred to as the 'site').

The site has a combined area of approximately 1,800sqm. The site has frontage to both Norton Street (eastern boundary) and Carlisle Street (portion of southern boundary), as well as a narrow laneway located adjacent to the western boundary.

10.2 BACKGROUND

At its meeting on 23 April 2013, Leichhardt Municipal Council resolved to establish a planning agreement for the site to assist the provision of affordable and supported housing. Leichhardt Municipal Council subsequently commissioned Allen Jack + Cottier to work with the land owner and local community representatives to develop development guidelines for the site.

Community consultation was initiated in March 2014 to develop a set of 'Guiding Principles' relating to how development should proceed at the site. A draft building envelope and controls for the site were subsequently developed with reference to these principles, which were then subject to additional community exhibition. The guiding principles, indicative building envelopes and proposed development controls were endorsed by Leichhardt Council at their ordinary meeting on 16 December 2014.

10.3 OBJECTIVES

To provide objectives and controls to guide development of the site so as to ensure that the development is compatible with the surrounding area, meets the desired future character and needs of the community. In particular, these objectives and controls aim to achieve a development that:

O1 Complements the existing fine grain sub-division pattern and the desired future character of the streetscape and surrounding area.

O2 Achieves architectural and urban design excellence.

O3 Maintains adequate solar access and amenity to surrounding residences.

O5 Improves amenity and overall appearance of Norton Street and Carlisle Street.

O6 Renews the public domain on the site boundaries to complement the desired future character.

07 Activates the Norton Street streetscape and improves pedestrian access and encourages the use of public transport.

10.4 DESIRED FUTURE CHARACTER STATEMENT

The site is within the Leichhardt Commercial Distinctive Neighbourhood (Section C2.2.3.5 of this plan) and the Norton Street – Centro Sub Area (Section C2.2.3.5(c)) and borders the Civic Area - Collina Sub Area on the southern boundary.

O1 The new character of the site should:

a) respond to the topography of the site, the character of Norton Street, and adjacent residential uses;
b) maintain the varied character of the area by ensuring new development is complementary in terms of its architectural style, built form and materials;
c) promote building styles that enhance and contribute to the identity of the neighbourhood;
d) protects and enhances existing Heritage Items and the heritage significance of the Heritage Conservation Area;
e) reflect the fine-grain character of the area through inclusion of strong vertical 'fine grain' building articulation;
f) maintain and enhance the streetscape of Norton Street and Carlisle;
g) incorporate high quality materials and construction finishes;
h) enhance pedestrian amenity by ensuring continuous weather protection within the commercial area; and
i) encourage redevelopment to reflect the small shopfront character of the area.

10.5 PUBLIC DOMAIN

10.5.1 ACTIVE FRONTAGES

Objectives

O1 To ensure that uses and frontages of buildings on Norton Street contribute to the activation of the public domain.

O2 To ensure that design of residential frontages maximise surveillance of the public domain and reinforces the activation of the street environment.

O3 To ensure that façade articulation and elements within the building setback areas facilitate an active street environment.

Control

C1 The ground floor of development located on Norton Street should accommodate active uses such as shops, cafes and restaurants and appropriate commercial uses and access to buildings.

C2 Level pedestrian access should be provided to non-residential ground floor uses.

C3 Building frontages located above the ground floor should include living areas such as living rooms, dining rooms and bedrooms to overlook the street for passive surveillance.

C4 Building frontages should incorporate balconies, windows, fenestration and other built form elements wherever possible to maximise opportunities for passive surveillance of the street.

10.5.2 AWNINGS

Objectives

O1 To ensure that awnings or weather protection structures serve to enhance public use and amenity of non-residential ground floor buildings and the streetscape.

Controls

C1 Development located on Norton Street should incorporate an awning or weather protection structure at first floor level.

C2 The setback from the kerb of any awning or weather protection structure should generally be consistent with the adjoining properties.

C3 Awnings and weather protection structures are to be complementary to the building and streetscape in terms of materials, detailing and form.

10.6 BUILT FORM AND DESIGN

10.6.1 Building height and bulk

Objectives

O1 To ensure that the height of development responds to the existing and future scale, character and form of the streetscape and surrounding area.

O2 To maintain solar access and amenity to surrounding residences and the public domain.

O3 To minimise overshadowing of surrounding properties and public domain.

O4 To ensure development has a bulk and scale which reflects the surrounding context.

O5 To minimise visual impacts of building bulk on neighbouring and nearby properties.

Controls

C1 Development should not exceed the maximum height in storeys and RL's as shown in Figure 1.

C2 Development of the site is to comply with the maximum building envelopes as shown in Figures 2 - 5, which reflect the 32º winter shadow angle taken from RL 56.2 on the western side of Carlise Street.

C3 Structures including roof elements and lift overruns may be provided on rooftops, subject to consideration of potential impacts on the streetscape, the amenity of the adjoining properties and the overall character of the area.

Figure 1: Building Heights and Massing Envelope

Figure 2: Building Heights and Massing Envelope - Section A (Norton St elevation)

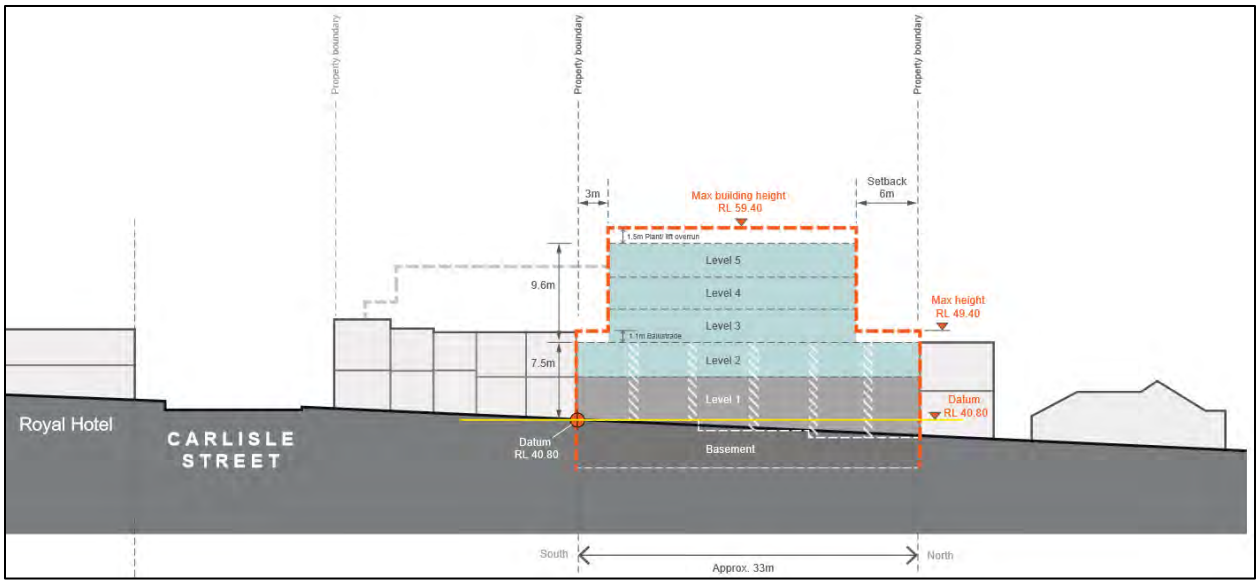


Figure 3: Building Heights and Massing Envelope – Section B

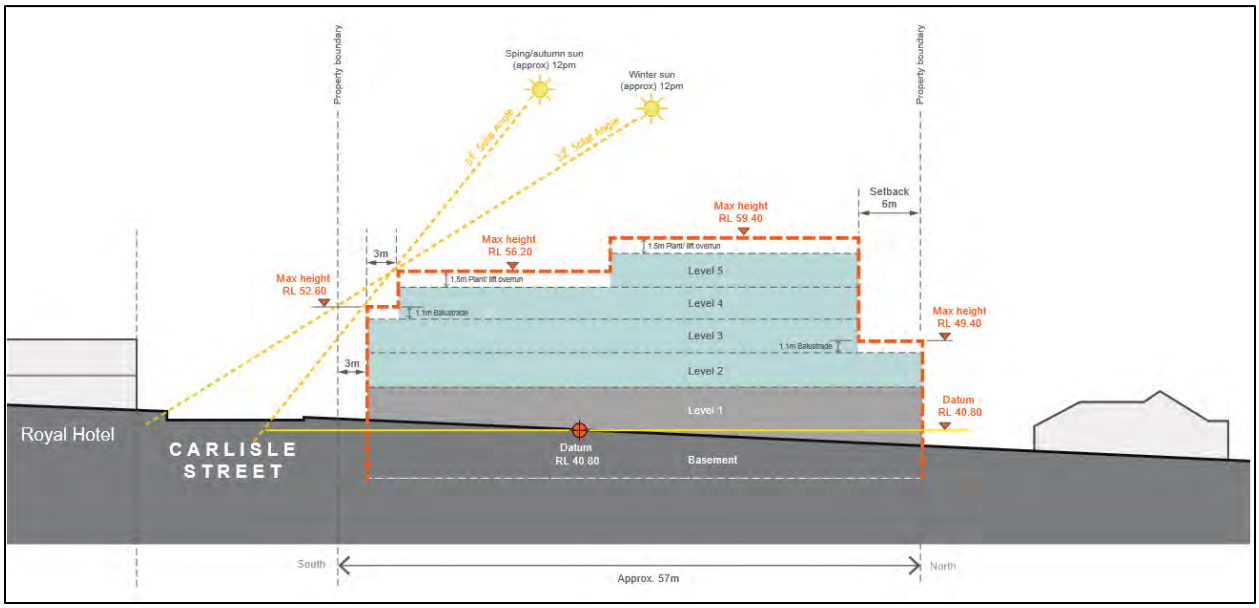


Figure 4: Building Heights and Massing Envelope - Section C (Carlisle St elevation)

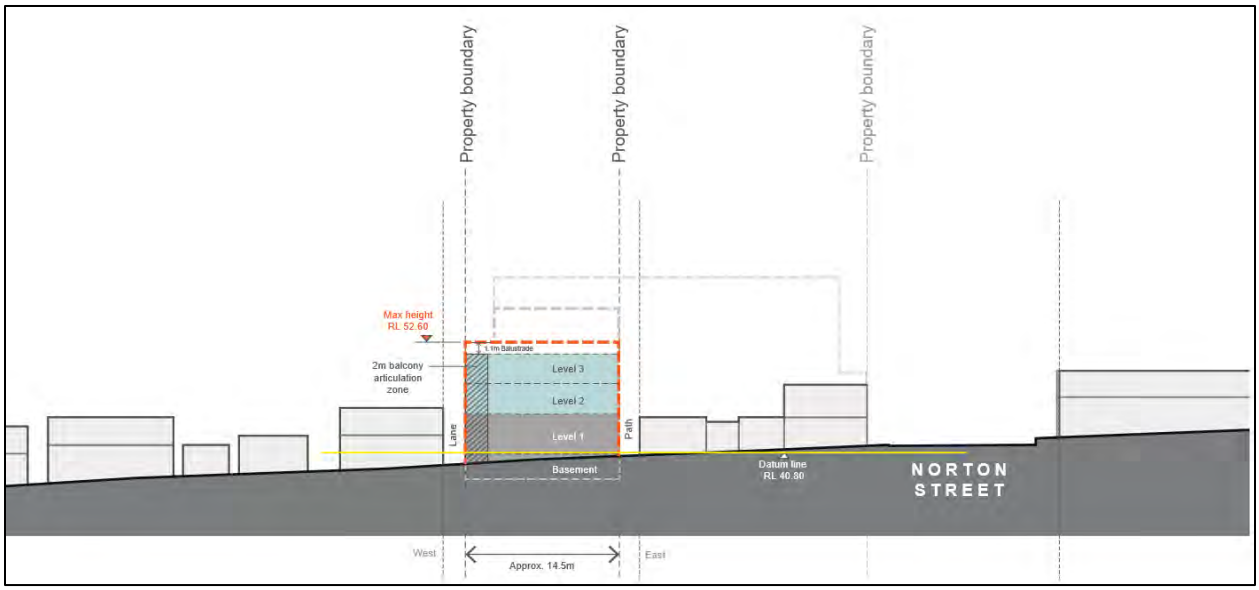
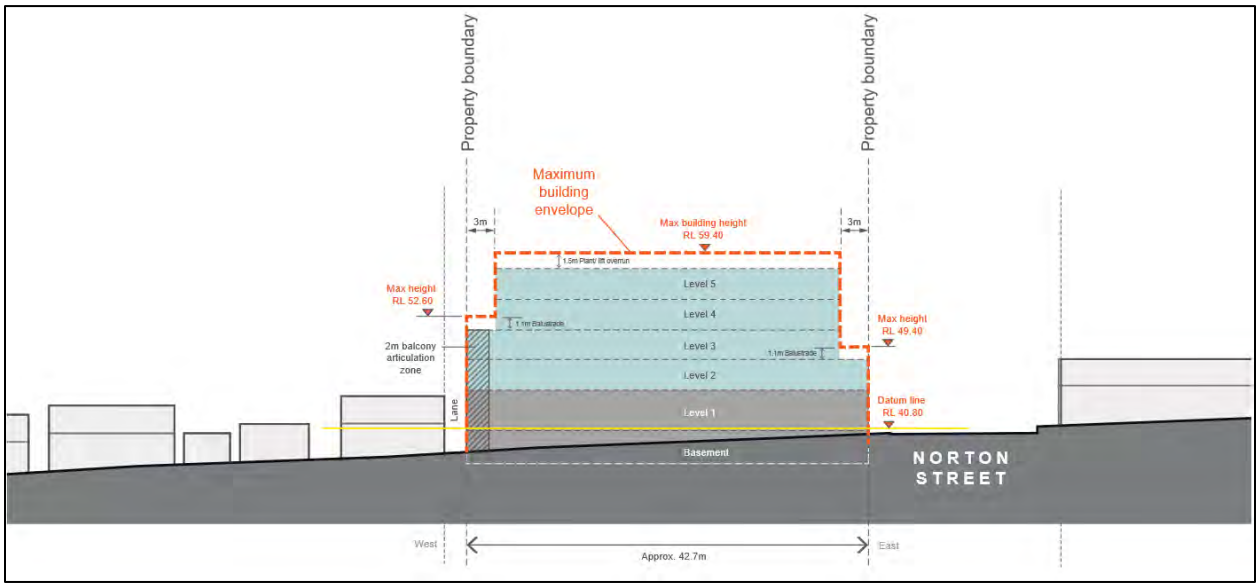


Figure 5: Building Heights and Massing Envelope - Section D



10.6.2 Building setbacks, separation and articulation

Objectives

O1 To ensure that buildings are modulated and articulated to respond to streetscape, visual bulk and amenity issues.

O2 To maintain solar access and amenity to surrounding residences, the public domain and development within the site.

O3 To ensure that the building mass and articulation along 168 Norton Street complements the articulation and character of the street.

O4 To minimise visual impacts of the buildings on neighbouring properties.

O5 To ensure that buildings have adequate separation to minimise visual bulk and to ensure adequate amenity within the site.

Controls

C1 Setbacks should be provided in accordance with the details in Figure 1.

C2 Development should be located within the envelopes shown in Figures 2 - 5 to ensure appropriate separation from the adjoining properties.

C3 Development on Norton Street should be built to the street alignment and have a two storey frontage addressing Norton Street to continue the strong street edge.

C5 The western and northern building façade should be articulated through the use of balconies, windows and fenestration.

10.6.3 Building materials and finishes

Objectives

O1 To ensure that buildings have a high quality appearance and have regard to the character of the surrounding area.

Control

C1 Building and landscape materials are to be fit for purpose and reflect the Desired Future Character Statement, be appropriate for climatic conditions and be of high specification to ensure long term quality and sustainability of the development.

C2 Materials to be used may include:
a) Heavy materials for the base structure: concrete, masonry, render;

b) Lightweight materials for the top of the building to allow flexibility in roof form: steel, aluminum and other metallic materials;
c) Screening elements: to provide enhanced privacy to the occupants of the development as well as to adjoining residential properties; and
d) Intended building materials are to be clearly identified on the Development Application documentation.

C3 Any building with a wall greater than 20m in length is to include building material palette options, architectural fenestration elements and insets to articulate the façade and delineate visual massing of buildings.

10.6.4 Design of building elements

Objectives

O1 To ensure that fronts, backs and tops of buildings have a high quality appearance and have regard to the character of the surrounding area.

Controls

C1 Buildings are to be designed in accordance with the Desired Future Character Statement.

C2 The design of the buildings should be contemporary in nature but make reference to the form, scale and articulation of the local streetscapes.

C3 Buildings and landscape elements, including balconies, entries, rooflines and screening, are to contribute to the character of the streetscape, enhance opportunities for visual supervision of the public domain, reduce overlooking, enhance residential amenity and make a positive contribution to place identity.

C4 The design of the buildings should be of contemporary design, be fit for purpose for those visiting, working, or residing within the development and nearby.

C5 Where the topography results in basement walls exceeding 0.5m above natural ground level, high quality materials or plantings are to be used to minimise visual impacts.

10.7 PARKING AND ACCESS

10.7.1 Vehicular access

Objectives

O1 To ensure that building vehicular access and egress points are best located to reduce potential for traffic conflict.

O2 To ensure that vehicular access points are well-designed and secondary to pedestrian routes.

Controls

C1 Vehicle access and egress points will be provided from laneway located on the western boundary of the site generally in accordance with Figure 1.

C2 Vehicle access should be separated from pedestrian entries to avoid pedestrian vehicular conflict.

10.8 WASTE AND RECYCLING MATERIALS STORAGE AND DISPOSAL

10.8.1 Waste and recyclable materials temporary storage and disposal facilities

Objectives

O1 To ensure that adequate on-site provision is made for the temporary storage and disposal of waste and recyclable materials.

O2 To ensure that opportunities to maximise source separation and recovery of recyclables are integrated into the development.

O3 To minimise risk to health and safety associated with handling and disposal of waste and recycled material and the potential for adverse environmental impacts associated with waste management.

Controls

C1 Waste management and storage areas are to be located, designed and constructed to ensure integration into the streetscape of the western boundary lane way.

C2 A completed Site Waste Minimisation and Management Plan (SWMMP) should accompany any development application.

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Arboricultural Impact Appraisal

168 Norton Street
Leichhardt, NSW

Prepared for
Uniting

29 November 2016

by Andrew Scales
Dip. Horticulture / Dip. Arboriculture AQF5
PO Box 5085, Elanora Heights NSW 2101

E: info@ naturallytrees.com.au M: 0417 250 420

Summary

The proposed development is to demolish the existing building and replace it with a block of Independent Living Units. I have inspected all the trees that could be affected and list their details in Appendix 2. Based on this information, I provided guidance to project architect on the constraints these trees impose on the use of the site.

Seven low category trees will be lost because of this proposal. However, they are not visible from outside the ensuring there is no impact on the wider setting. The proposed changes may adversely affect one low category tree if appropriate protective measures are not taken. However, if adequate precautions to protect the retained trees are specified and implemented through the arboricultural method statement included in this report, the development proposal will have no adverse impact on the contribution of trees to local amenity or character.

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Appendices