THE UNITING CHURCH IN AUSTRALIA
PROPERTY TRUST (NSW)

TRAFFIC REPORT FOR PLANNING PROPOSAL FOR PROPOSED RESIDENTIAL AGED CARE FACILITY, 17 MARION STREET, LEICHHARDT

OCTOBER 2016

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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 residential aged care facility at 17 Marion Street, Leichhardt. The site of the proposed development is shown in Figure 1.

1.2 The site is occupied by an aged care facility (Annesley House) with 86 beds. It has frontage to, and access from, Marion Street. The planning proposal would provide for a scale of development comprising an aged care facility of up to 133 beds, or a facility with 95 beds plus 20 independent living units. Associated facilities would be provided including common areas, café and meeting rooms. Vehicular access would be provided from Marion Street.

1.3 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 17 Marion Street, Leichhardt, as shown in Figure 1. It is occupied by a residential aged care facility (Annesley House), which provides 86 beds. The site has frontage to, and vehicular access from, Marion Street. Three driveways are provided to the site from Marion Street.

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

2.3 Marion Street is an east-west street which provides access through the Leichhardt town centre. 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, close to the site.

2.4 East of the site, Marion Street intersects Norton Street at a signalised intersection. 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. It provides for one traffic lane and one parking lane in each direction, clear of intersections. Norton Street has a 40 kilometre per hour speed limit, being in an area of high pedestrian activity.

Traffic Flows

2.5 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.

2.6 In order to gauge traffic conditions, counts were undertaken at these times at the intersection of Marion Street with Norton Street. The results of the surveys are shown in Figures 2 and 3, and summarised in Table 2.1.

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 Marion Street	640	720
	South of Marion Street	845	1,015
Marion Street	East of Norton Street	1,315	1,275
	West of Norton Street	1,440	1,370

2.7 Table 2.1 shows that Norton Street carried traffic flows of some 640 to 1,015 vehicles per hour two-way during the surveyed peak hours. Marion Street carried flows of some 1,275 to 1,440 vehicles per hour two-way.

Intersection Operation

2.8 The capacity of the road network is largely determined by the capacity of its intersections to cater for peak period traffic flows. The intersection of Marion Street with Norton Street has been analysed using the SIDRA program for the traffic flows shown in Figures 2 and 3.

2.9 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

- 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

2.10 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.

2.11 The analysis found that the signalised intersection of Marion Street with Norton Street is operating with average delays of some 42 seconds per vehicle or less during weekday peak periods. This represents level of service C, a satisfactory level of service.

Public Transport

2.12 Local bus services are provided by Sydney Buses. As previously discussed, buses operate along Marion Street and there is a bus stop adjacent to the site. Services also operate along Norton Street, east 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.

2.13 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 an aged care facility of up to some 133 beds, or a facility with 95 beds plus 20 independent living units. Associated facilities would be provided including common areas, café and meeting rooms. Vehicular access would be provided from Marion Street. 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 Marion Street and Norton 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 parking as follows:

- one space per 10 beds; plus
- one space per two employees on duty at one time;
- one space for an ambulance; and
- one parking space per five ILUs (when the applicant is a social housing provider, such as Uniting).

3.6 With 133 beds and up to some 25 employees proposed, the parking requirement would be some 26 spaces. Based on 95 beds, 20 ILUs and 18 employees, the development would require some 23 spaces.

3.7 Parking will be provided to satisfy the above requirement. Final parking provision will be determined in association with the future development application. An ambulance space will also be provided in accordance with the SEPP.

Access, Servicing and Internal Layout

3.8 Vehicular access would be provided via a driveway on Marion Street. The driveway would provide access to the parking and service vehicle areas.

3.9 Parking spaces will be a minimum of 5.4 metres long by 2.5 metres wide. Spaces with adjacent obstructions will be 0.3 metres wider to provide for doors to open. Disabled spaces will have an adjacent 2.4 metre wide shared area, for wheelchairs. 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 disabled 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.

3.10 A loading bay will be provided on the site, to cater for service vehicles, including garbage collection and deliveries. Service vehicles will be able to enter and exit the site in a forward direction.

Traffic Generation and Effects

3.11 Traffic generated by the proposed residential aged care facility will have its greatest effects during weekday peak periods when it combines with other traffic on the surrounding road network.

3.12 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. On this basis, the proposed development would have a traffic generation of some 15 to 30 vehicles per hour two-way during weekday peak periods. This is a low generation.

3.13 Such a low generation would not have noticeable effects on the operation of the surrounding road network. The intersection of Marion Street with Norton Street would continue to operate at its existing good level of service, with similar average delays per vehicle.

3.14 The project architect has advised that the additional floor space being sought in association with the planning proposal (compared to that permitted under the existing planning controls) is equivalent to some 65 beds. These beds would have a peak hour traffic generation of some 10 vehicles per hour two-way at peak times.

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

Summary

3.16 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 residential aged care facility of some 133 beds, or 95 beds plus 20 independent living units;

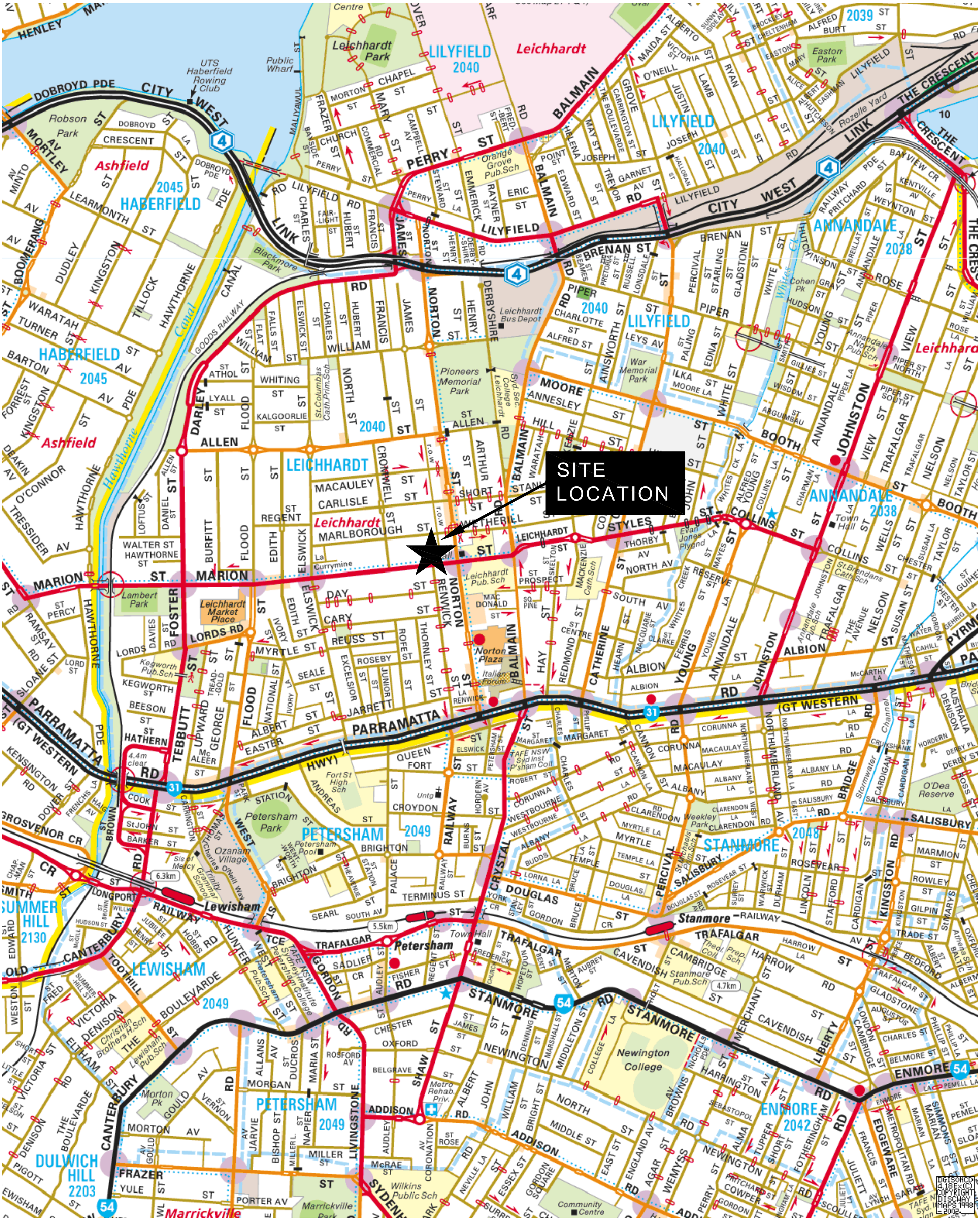
ii) the proposed development will be readily accessible by public transport;

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

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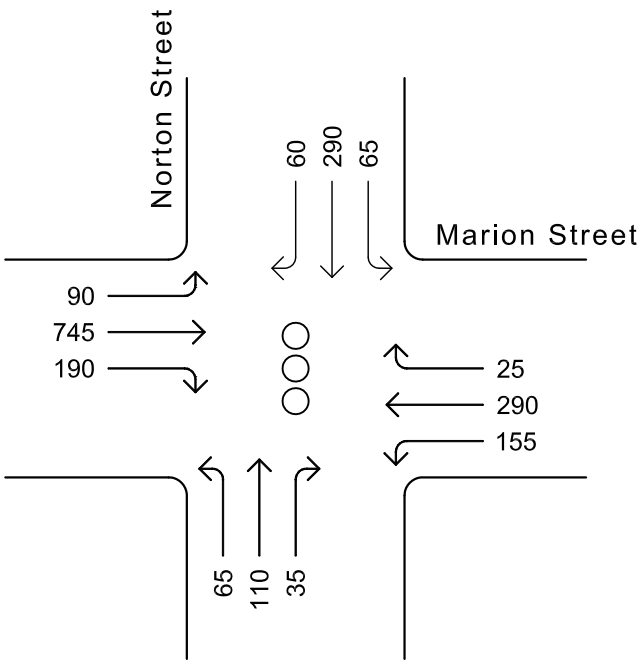
Figure 1



Existing weekday morning peak hour traffic flows

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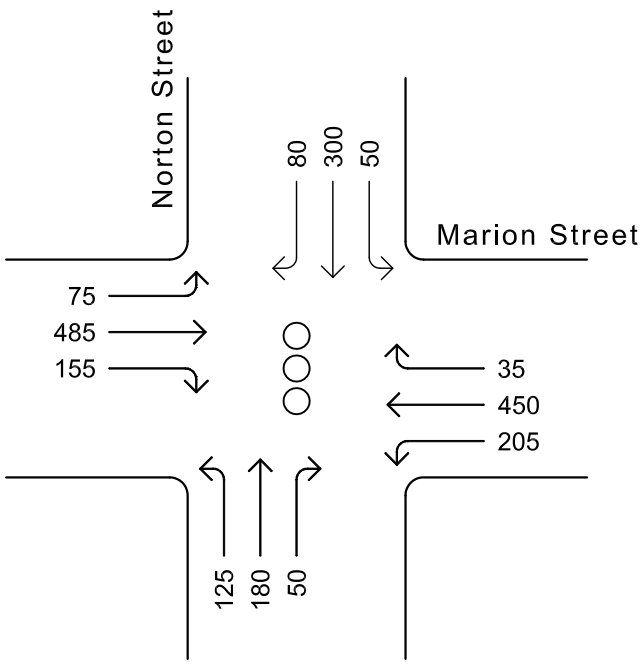
Figure 2



Existing weekday afternoon peak hour traffic flows

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Figure 3