



traffic impact assessment

project application for lot 3 within the former sunbeam site at
charlotte street and harp street, clemton park

prepared on behalf of Parkview Sydney developments by TRAFFIX traffic & transport planners

ref: 08 088 Lot 1 PA report v3 october 2008



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Appendix 1: Photographic record

Appendix 2: Reduced Plan Extracts

Appendix 3: Swept Path Analysis



1. introduction

Traffix has been commissioned by Parkview Sydney Developments to undertake a traffic impact assessment of a Project Application for Lot 3 within the former Sunbeam site in Charlotte Street at Clemton Park. The report should be read in the context of the Environmental Assessment Report for the Concept Plan Application that was prepared by Planning Workshop Australia, which was a separate application made under Part 3A of the Environmental Planning and Assessment Act, 1979. That report included a comprehensive traffic impact assessment report prepared by Traffix, which forms the context for this Project Application and which dealt with the overall cumulative traffic impacts associated with the total site.

This report should also be read in conjunction with the overall Environmental Assessment Report for this Lot 3 Project Application, of which this report forms a part. The Environmental Assessment Report has been prepared by Planning Workshop Australia and deals with all relevant matters as required under the Environmental Planning and Assessment Act, 1979.

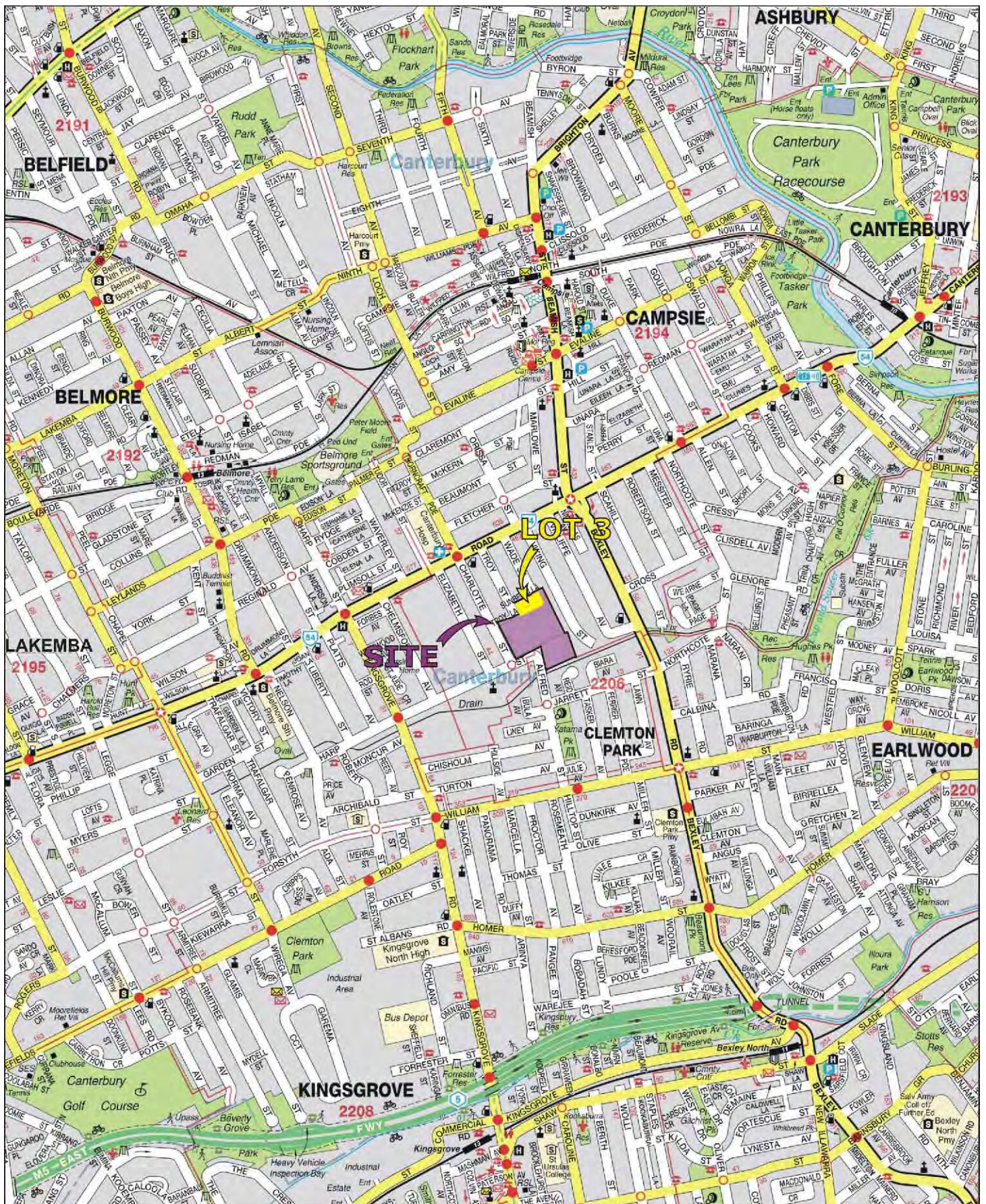
This report documents the findings of our investigations and relates to the development of 58 residential units and a child care facility for 75 children.



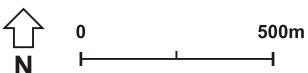
2. location and site

The overall Clemton Park site is situated at the former Sunbeam factory in Harp Street, about 300 metres south of Canterbury Road and about 100 metres west of Bexley Road, at Clemton Park. It lies within an established industrial precinct and is about 1.2 kilometres south of the existing Campsie town centre. In a more local context, it has primary road frontages to Harp Street and Charlotte Street, while secondary accesses are also available at the southern end of Troy Street and Wade Street. These frontages have all been used historically for vehicular access to the site and continue to be used as significant site accesses. The overall site is shown in **figures 1 and 2**.

Lot 3 has a frontage to Troy Street on its southern side and New Troy Street on its eastern side. The western boundary is formed by Sunbeam Lane which is a pathway. This lot has a rectangular configuration and currently comprises a large industrial building. The site is shown in figure 3, with a Photographic Record presented in **appendix 1**, which provides an appreciation of the general character of roads and other key attributes in proximity to the site.



Source: UBD 2008



project application: residential & childcare
60 charlotte street, clemton park

figure 1
location



prepared on behalf of parkview sydney developments
by traffic traffic & transport planners



cadastre plan

0 200m

aerial photograph: dated January 2007

0 100m

project application: residential & childcare
60 charlotte street, clemton park

figure 2
site



prepared on behalf of parkview sydney developments
by **traffix** traffic & transport planners



3. existing traffic conditions

3.1 road hierarchy

The surrounding road network and hierarchy is presented and discussed in detail in the Traffic Assessment Report prepared in support of the Concept Plan Application for the overall site. The road system comprises:

- | | | |
|---|-----------------|--|
| □ | Canterbury Road | is an important RTA State Road (MR 167) carrying some 43,000 vehicles per day in the vicinity of the site and serving as a east-west link between the Sydney CBD and the western suburbs; |
| □ | M5 Motorway | is an RTA State Road (MR 6005) and is one of Sydney's major links from the CBD to the south western suburbs. It lies to the south of the site and is accessed via Canterbury Road and King Georges Road |
| □ | Bexley Road | is an RTA State Road (MR 169) and is a continuation of Beamish Street to the south of Canterbury Road. It is also a major north south link between Canterbury Road and the M5 motorway. It carries approximately 23,000 vpd in the vicinity of the site; |
| □ | Beamish Street: | is an RTA Regional Road (SR 2014) which acts as a north south link from Georges River Road in the north to Canterbury Road in the south and carries about 22,000 vpd in the vicinity of the site. |
| □ | Kingsgrove Road | is a local collector road that connects Canterbury Road in the north with Stoney Creek Road in the south and carries about 12,000 vpd. |
| □ | Harp Street | is a local industrial collector road that connects Kingsgrove Road to the west of the site with William Street to the south of the site, via Albert Street. It runs |



generally east-west along the southern boundary of the site and carries about 7,000 vpd.

- Charlotte Street is a local collector road that connects Canterbury Road to the north of the site with Harp Street to the south of the site. It runs north-south along the western site boundary and carries about 5,000 vpd.
- Troy Street is a local residential street that provides access to residential properties along its length, as well as the current industrial uses on the subject site. It connects through to Charlotte Street via an existing laneway (on the alignment of the proposed New Troy Street).

3.2 overview of existing traffic conditions

Canterbury Road is constructed with a 12.8 metre wide carriageway, with 3.6 metre wide footpaths along both sides. It carries two through traffic lanes in each direction, with 'No Parking' and AM/PM 'Clearways' signposted on both sides.

Bexley Road and Beamish Street together form a four-way junction with Canterbury Road and this is a major intersection in the locality which is under traffic signal control. West of this intersection, Charlotte Street and Thorncraft Parade together form a four way junction with Canterbury Road and this intersection is also under traffic signal control. However, there is a right turn prohibition at this intersection for the movement from Canterbury Road into Charlotte Street (west to south). Accordingly, right turns from Canterbury Road occur at Kingsgrove Road, which is also under traffic signal control.

Harp Street forms a four way signal-controlled junction with Kingsgrove Road to the west of the site. A roundabout is provided at the intersection of Charlotte Street with Harp Street adjacent to the site, which provides single lane circulating traffic flow. To the east of this roundabout, Harp Street undertakes a sharp right bend into Alfred Street. This bend incorporates a short length of concrete median to provide channelisation of traffic.



Further to the south along Alfred Street, local access routes are available onto Bexley Road via Jarrett Street and William Street. Jarrett Street is not a favourable route for traffic exiting the subject site due to the fact that all traffic must turn left from Jarrett Street into Bexley Road.

Lot 3 is located within a new block that will be created by the construction of New Troy Street and Troy Street, as discussed in the Concept Plan Application and as is evident from figure 3.

3.3 existing public transport services

The site benefits from good access to bus services as discussed in the Concept Plan Application. These services are important for both the journey-to-work as well as shopping and other trips, with direct services provided to the Sydney CBD, Rockdale, Bondi Junction, Bankstown, Drummoyne and Five Dock.

The site is located 1.6kms from Campsie Railway Station.

3.4 existing intersection performances

The traffic assessment report prepared for the Concept Application was based on extensive surveys during the AM and PM peak periods. These surveys confirmed that no change has occurred since the previous 2004 and 2006 traffic studies undertaken for this site, with no effective growth on the local road system. This is also supported by a review of traffic conditions at the RTA's nearby permanent count station (Station 24.213) which shows that the annual average daily traffic (AADT) has reduced from 47,778 on 1999 to 42,056 in 2005 (which is in fact less than traffic volumes that occurred in



1993) and this is largely attributable to the influence of the M5 Motorway. The key intersections in the locality that are of interest and were surveyed and assessed are as follows:

- The intersection of Charlotte Street with Canterbury Road,
- The intersection of Bexley Road with Canterbury Road;
- The intersection of Bexley Road with Jarrett Street;
- The intersection of Jarrett Street with Alfred Street;
- The intersection of Harp Street with Charlotte Street; and
- The intersection of Harp Street with Kingsgrove Road.

The surveys and the analysis undertaken showed that all of the above intersections operate generally satisfactorily during both the AM and PM peak periods. The previous report also assessed future conditions to compare the relative change in the performance parameters as a result of the overall development of all lots, including Lot 1. This is discussed further in the following sections.



4. description of lot 3 project application

A detailed description of the Project Application for Lot 3 is provided in the Environmental Assessment report prepared by Project Planning Australia, of which this report forms a part. In summary, the Project Application for which approval is now sought comprises the following components:

- Construction of a residential development with 58 units comprising:
 - 11 one bedroom units;
 - 39 two bedroom units; and
 - 8 three bedroom units
- Construction of a 75 place child care centre with a building area of 604m² to be operated by a maximum of 15 staff;
- The provision of a single basement with capacity for 93 spaces, with access onto Troy Street;
- Provision of car wash, bicycle, garbage and storage facilities; and
- The closure of Troy Street at the site boundary with a turning facility.

The parking and traffic impacts arising from the Project Application are discussed in the following sections. Reference should be made to the plans submitted separately to the Department of Planning, (prepared by Marchese + Partners International) some of which are presented at reduced scale in **appendix 2** for ease of reference.



5. parking requirements

5.1 parking rates and provision

➤ Residential Units

The site is subject to the controls of Canterbury Council's Parking DCP No. 20 (Car Parking). Council's DCP requires one space per 1 bedroom unit or studio unit; 1.2 spaces per unit for a 2 bedroom unit; and 2 spaces per unit for a 3 (or more) bedroom unit. Additional visitor parking is required at a rate of 1/5 units.

The building accommodates 11 one bedroom unit, 39 two bedroom units and 8 three bedroom units. Hence, the parking requirement will be for 86 spaces as follows:

➤	11 units @ 1.0/unit	11 spaces; plus
➤	39 units @ 1.2/unit	47 spaces; plus
➤	8 units @ 2.0/unit	16 spaces; plus
➤	58 units @ 1/5 units	12 spaces

➤ Child Care Centre

The childcare centre accommodates 75 children. Council's DCP requires 1 space per 2 staff, with a minimum of 2 spaces. It is proposed that the centre will employ up to 15 staff so that a need for 8 spaces results. It is relevant that this level of provision makes no allowance for parents/carers and based on the RTA's Guideline, a 75 place centre would require 19 spaces, including 8 staff spaces and 11 parent/carers spaces (note that the RTA's Guideline does not provide a split between staff spaces and parent/carers spaces). It is therefore proposed to provide 8 staff spaces, with 5 on-street spaces for set-down and pick-up. The demand for parent set-down and pick up is reduced from the RTA's requirement due to the fact that many parents will live or work within the site and will walk to the childcare centre.

➤ Combined Parking

The development requires a total of 94 spaces as assessed above. In response, 93 spaces are provided and this is satisfactory as peak residential visitor demands will occur outside the times of the



operation of the child care centre. Hence, residential visitors will have access to 5 dedicated visitor spaces during the day; and 13 spaces during the evening and on weekends, which exceeds the 'nominal' requirement for 12 visitor spaces.

5.2 disabled parking

A total of 6 disabled spaces are provided for residents associated with the adaptable units (not all of whom will require parking) as well as for occasional visitors.

5.3 servicing

The servicing requirements of the development are moderate and any servicing can occur on-street. Servicing of the child care centre will be undertaken primarily by staff using their own vehicles, for which parking is already provided within the basement. Regular servicing of the residential component of the development will relate to Council's garbage services, which will occur on-street adjacent to Troy Street, using the temporary garbage storage area that is provided.

5.4 car wash

A car wash bay is provided within the basement. This will be bunded and drained to avoid discharge into Council's stormwater system.

5.5 bicycle parking

Council's DCP requires 1 space/5 units for residents and 1 space/10 units for visitors. With 58 units, the development requires 18 bicycle spaces (12 for residents and 6 for visitors). An additional 4 spaces are required for staff of the child care centre, resulting in a total requirement for 22 bicycle spaces. In response, 16 spaces are available within the basement within a central storage area for use by staff and residents; while the 6 visitor spaces would be more appropriately located at ground level, which can be the subject of a condition.



6. traffic impacts

6.1 traffic generation

The 58 residential units will generate 22 veh/hr during both peak periods as assessed in the Concept Plan application, based on a trip rate of 0.36 trips/unit. This will involve 4 in and 18 out trips in the AM peak with these flows reversed in the PM peak. The child care centre will generate 28 veh/hr in the AM peak (14 in, 14 out) and 26 veh/hr in the PM peak (13 in, 13 out) as also assessed in the Concept Plan application. These trips arise from the application of RTA trip rates in the first instance, with adjustments for factors relating to:

- the high proportion of children within the centre who will be associated with residents and staff within the overall Concept Plan site, who will walk to the centre;
- the existing public transport services that are available in close proximity to the site, notably along Canterbury Road;
- the public transport improvements that will occur in response to the development, due to the increased residential and employee densities;
- the incidence of linked trips and multi-purpose trips, as defined by the RTA; and
- the fact that no allowance (discount) has been allowed for the industrial uses that current operate from Lot 3, which are significant based on observations and include heavy vehicles.

The impact of the above traffic generation and distribution onto the surrounding intersections is assessed in detail in the Concept Plan traffic impact assessment.



6.2 traffic impacts

- Based on the above trips, the net increase in traffic generation over and above existing traffic levels in Troy Street is estimated to be as follows:
- 20 in, 28 out in the AM peak; and
- 25 in, 21 out in the PM peak

The additional traffic equates to less than one additional movement through the intersection of Troy Street with Canterbury Road every minute. This can be readily accommodated and will create no impacts either in terms of the efficiency of this intersection; or the environmental amenity of Troy Street itself.

The set-down and pick-up activity associated with those parents who do not walk to the centre will relate to the 5 on-street spaces, with an average arrival rate of one vehicle every two minutes. With 75 children and assuming that 50% of children are driven, then the typical parent/carer demand of 1 space/8 children will reduce to 1 space/16 children. Hence, the 5 on-street spaces proposed would be adequate. Nevertheless, it is noted that there is extensive available on-street parking in Troy Street, so this could be relied upon if necessary. However, it is not recommended that more than 5 spaces be signposted for 10 minute parking at peak times as this would unduly impact on existing residents.

The 5 spaces proposed for set-down and pick-up are located parallel to the site frontage, with a realigned footpath. Hence, the available carriageway width is 14.5 metres and this is sufficient for a 'U' turn manoeuvre adjacent to the proposed road closure. It is recommended however that 'No Stopping' restrictions be imposed within the dead-end section of roadway. This will be required in any event to allow general traffic to turn.

There will be less impacts during the day, at night time and on weekends when the child care centre will not be operational.



Finally, the cumulative traffic impacts associated with the overall site, including Lot 3, has been assessed in the Concept Plan application and is acceptable. This also takes account of the proposal to remove Troy Lane and construct New Troy Street to connect with Charlotte Street. The existing Troy Street, at the site boundary, will be terminated as shown in the submitted plans. This will remove the ability of vehicles to use this route as a short cut, thereby preserving the amenity of existing residents in Troy Street. The minor inconvenience to existing Troy Street residents is considered to be outweighed by their enhanced amenity.

It is proposed that Troy Street will be signposted with 15 metres of “No Stopping” restrictions on both sides at the closure, to provide a safe turning facility. It will also be necessary to install a “No Through Road” sign at Canterbury Road. These are matters that will ultimately be considered by Council’s traffic committee.

6.3 Demolition traffic impacts

It is anticipated that a detailed demolition management plan, incorporating a demolition construction traffic management plan, will be prepared following approval and this is anticipated as a condition on any consent that may be issued. It is expected that traffic activity will be focussed on Troy Street, with limited reliance on Charlotte Street.

6.4 Construction Traffic Impacts

It is anticipated that a detailed construction traffic management plan will be prepared in response to a condition of consent. Construction activity is expected to be moderate on an average day, with short peaks at critical times, such as during concrete pours. It is proposed that construction workers park within the basement when constructed, to minimise on-street parking.



7. access & internal design aspects

7.1 site access arrangements

The development will make reliance on the developed road system as shown on the submitted Concept Plan documentation. Lot 3 will be accessed via Troy Street. This occurs via a single combined entry/exit driveway/ramp system with a width of 5500mm (kerb to kerb) and additional 300mm kerbs on both sides.

Sight distances at this driveway are excellent and Troy Street terminates to the immediate south of the site, so that traffic speeds will be very low.

7.2 internal design

The ramp gradients and widths comply fully with AS 28901 and the ramp access and internal manoeuvrability for critical spaces is shown in **appendix 3**. Parking spaces are a minimum of 2.5 metres wide and 5.4metres long with 5800mm wide aisles also in accordance with AS 2890.1.

Disabled parking spaces are 3.2 metres wide and 5.4 metres long, with a clear head height of 2300mm in all areas traversed and 2500mm within the spaces.

In summary, the internal design of the car park is acceptable and will provide a high standard of safety and efficiency.



8. conclusions

The following matters are noteworthy:

- The proposed Project Application is consistent with the principles and level of intensity for Lot 3 as foreshadowed in the Preliminary Environmental Assessment report;
- Traffic impacts have been assessed on the basis of the plans provided in appendix b and the land use discussed in this report, which includes 58 units and a 75 place child care centre. The resulting traffic impacts can be readily accommodated within Troy Street in terms of both its capacity as well as its environmental amenity. Indeed, when consideration is given to the removal of the existing industrial uses with its attendant heavy truck activity, there is likely to be a net improvement in overall conditions;
- The cumulative impacts of traffic associated with Lot 3 as well as all other development within the Concept Plan area has been separately assessed in the Concept Plan application. This analysis has demonstrated that the traffic can be accommodated, subject to the improvements identified and the development of an internal public road network. This has included conditions on weekdays, Saturdays and Sundays.
- The child care centre will generate no traffic activity during the evenings or on weekends, so that impacts on Troy Street at these times will only relate to then 58 residential units, which will be minimal;
- The overall parking provision is in accordance with Council's DCP. Disabled parking is provided, together with bicycle storage and a car wash facility;
- The access and internal design arrangements comply with the requirements of AS 2890.1 as well as Council's requirements;

It is therefore concluded that the proposed development on Lot 3 is supportable on traffic planning grounds and will operate satisfactorily.