

**PROPOSED  
RECREATIONAL FACILITY  
AT  
97 HUNTER STREET  
HORNSBY**

**ASSESSMENT OF TRAFFIC AND  
PARKING IMPLICATIONS**

**For  
CCK ACADEMY  
- Martial Arts**

**August 2003**

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## **1.0 INTRODUCTION**

This report has been prepared to accompany a development application to Hornsby Shire Council for the change of use of the existing warehouse to a recreational facility for martial arts at 97 Hunter Street, Hornsby.

A development application has been made to council (DA 1167/03) from which preliminary consideration raised concerns in respect to the adequacy of car parking. Accordingly, Ms S. Wei from CCK Academy has commissioned Traffic Impact Services to undertake this report.

The purpose of the report is to describe the following:

- to provide a detailed description of the proposal
- to outline the road network servicing the site and the surrounding environment
- to assess the appropriateness of the parking provision
- to assess the traffic implications of the site

The location of the site is shown in Figure 1.

## **2.0 DEVELOPMENT PROPOSAL**

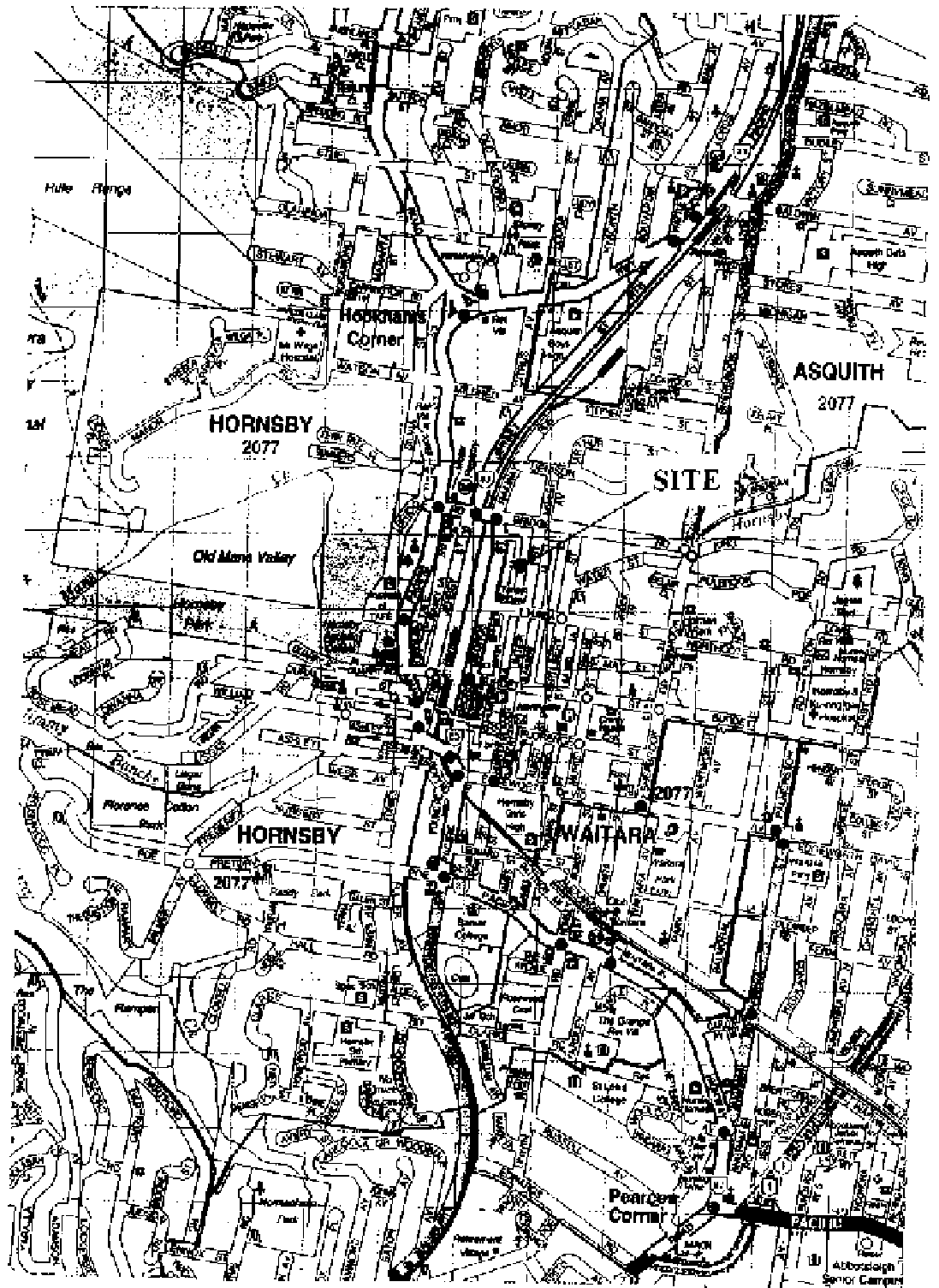
The proposal is for the usage of the second floor of the existing warehouse at 97 Hunter Street, Hornsby as a recreational facility comprising of lessons in martial arts, stretching and posture and self-defence.

The CCK Academy has been operating in the Hornsby area for 25 years, the last 9 years being in Carden Avenue, Wahroonga. The proposal is to relocate to a more central location being in Hunter Street, Hornsby which is considered closer to public transport and to patrons' residences.

The proposed site is located within an Industrial B zoned area and has a gross floor area of 285m<sup>2</sup>, being on the second floor with access gained by an internal staircase.

There are two other land uses on the site, being a carpet and lounge cleaning service to the rear of the site, and an automotive establishment at the front of the site.

There are a total of 12 parking spaces provided on the site with each of the businesses retaining 4 of these spaces. As the existing land uses operate during the normal business hours, the allocated 8 spaces for these businesses are free for use by the Academy during the evening periods.



<p><b>Traffic Impact Services Pty Ltd</b>          Traffic Engineering and Planning          Consultants          64 Oyster Bay Road Oyster Bay 2225          Fax/Phone 9528 2275</p>	<p><b>PROPOSED RECREATIONAL          FACILITY</b>          97 Hunter Street          Hornsby</p>	<p><b>LOCATION OF SITE</b>          FIGURE 1</p>
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The planned layout of the development proposal and the location of the parking spaces are shown in Figure 2.

The hours of operation of the Academy are:

Monday	10am	-	9pm
Tuesday	10am	-	9pm
Wednesday	10am	-	9pm
Thursday	10am	-	9pm
Friday	10am	-	4pm
Saturday	8am	-	4pm
Sunday	Closed		

Classes however are mainly from 4.15pm to 9.00pm, Monday to Friday, and 8.30am to 2.00pm Saturday, therefore clear of the main daytime trading of the nearby industrial land uses.

### **3.0 ROAD NETWORK, SITE & TRAFFIC CONDITIONS**

#### **3.1 Road Network**

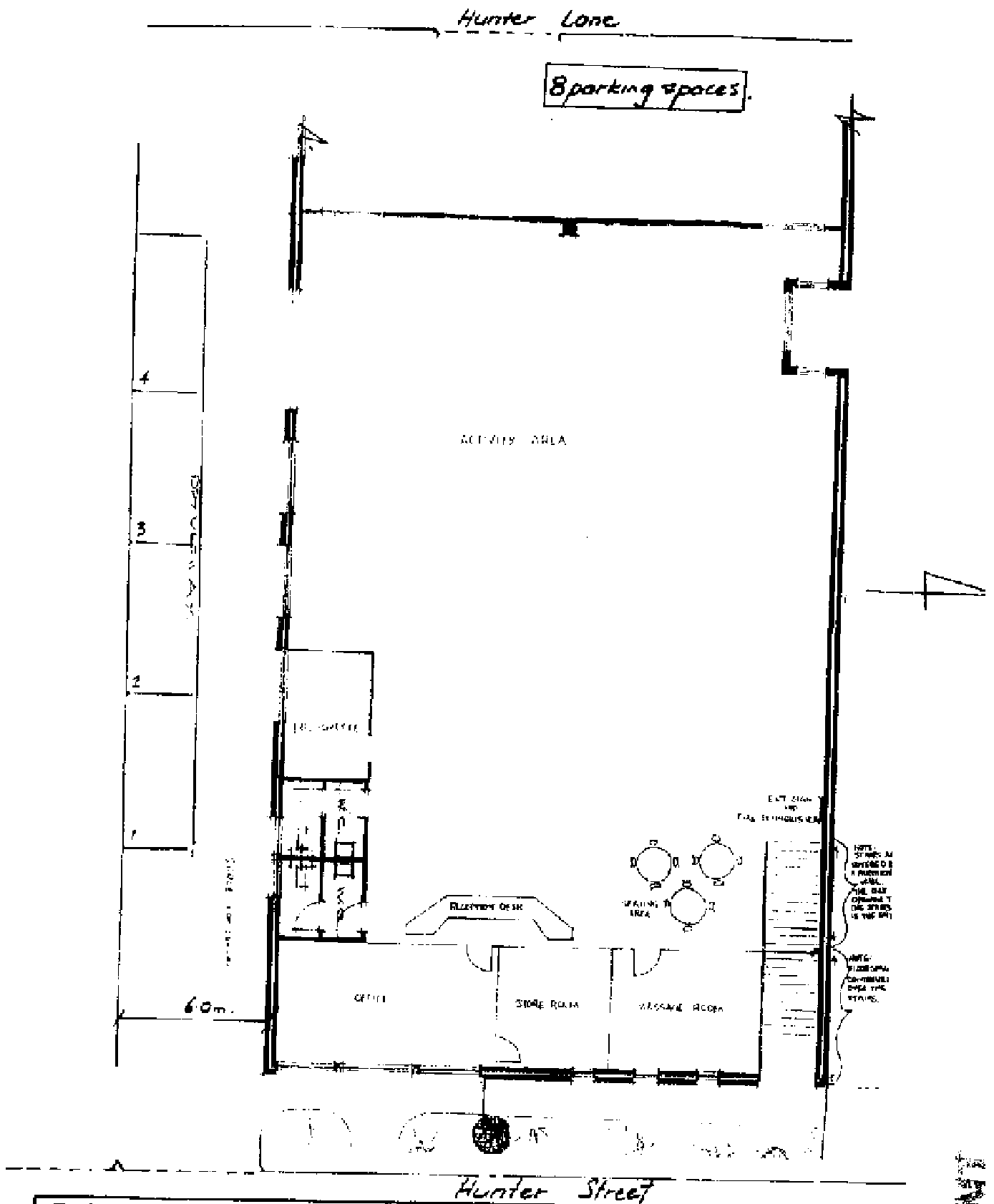
The road network servicing the development site is mainly restricted to Hunter Street, which is a local road under Council's control. Hunter Lane is to the rear of the site and provides alternative access to the site and is 6.0m wide.

Hunter Street adjoins the more heavier trafficked Bridge Road to the north and Burdett Street to the south, and is 12.8m in width and is provided with double centre lines mainly due to the overall topography. The provision of a roundabout just to the south of the development site (90 metres) at Linda Street provides a facility that reduces travel speeds and assists in the rationalisation of turning movements.

#### **3.2 Site**

The site is located within a mixed industrial and residential area. The western side of Hunter Street is predominantly industrial with the eastern side made up of residential unit development.

The development site is approximately 450 metres from Westfields and 500 metres from Hornsby Railway Station, providing reasonable access to major bus and rail transport needs.



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**PROPOSED RECREATIONAL  
 FACILITY  
 97 Hunter Street  
 Hornsby**

**DEVELOPMENT  
 PROPOSAL  
 FIGURE 2**

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### 3.3 Traffic Conditions

An indication of the prevailing traffic conditions on the road system in the vicinity of the site is evident from traffic counts undertaken in Hunter Street, between Bridge Road and Linda Street. These traffic counts were undertaken on Monday, 28 July 2003 and revealed the following:

Location	4.30pm – 5.30pm	6.00pm – 7.00pm
Hunter Street (outside 97)	220	139

It could be assumed from the above that Hunter Street would have an AADT of approximately 2,000 vehicles per day, which is considered a moderate movement for a local road.

### 4.0 CAR PARKING ASSESSMENT

The proposed development has a gross floor area of 285m<sup>2</sup> and 4 parking spaces have been provided on the site specifically designated to this land use. Although there are 12 parking spaces provided on the site, the remaining 8 spaces have been designated to the other 2 land uses, being that of a carpet and lounge cleaning business and an automotive establishment.

These spaces will be made available to the Academy during the night time activities with the authorisation for this arrangement shown in Annexure A.

Criteria for the determination of the parking provision for a recreational facility such as a martial arts academy is not depicted exactly in Council's code or in the R.T.A. Traffic Generation Developments Guidelines – 1995. The latter guidelines do, however, provide requirements for a Gymnasium (which could be assumed to be a similar land use) from which the off-street parking provision is 3.0 spaces per 100m<sup>2</sup> gross floor area.

As a result a total of some 8 to 9 parking spaces would be required based on these guidelines.

The proposal is to allocate a total of 4 parking spaces for the development site at all times and a further 8 spaces during the evening (after 5.30pm) by using the unused parking belonging to the adjoining land uses. However, to further assess the parking impacts from this development a more appropriate method is to examine the martial arts academy that is presently in operation at Wahroonga. This can be undertaken by measuring the parking requirements and impacts from that development and to transpose these to the new site at Hunter Street, Hornsby.

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The method for this determination has been undertaken by carrying out a:

- Determination of the number of student enrolments at the academy per class
- Parking and traffic survey at the proposed site at Hunter Street, Hornsby.
- Travel mode questionnaire survey at the proposed site at Hunter Street, Hornsby.

In addition to the above, details of the actual number of students enrolled in each class and the times of these classes have been obtained as follows:

### STUDENT NUMBERS FOR EACH CLASS

PM	Monday	Tuesday	Wednesday	Thursday	Friday
4.15 – 5.15	18		15		
5.15 – 6.30	6*				
6.30 – 8.00	30	15	30	6	4
8.00 – 9.00	12*		12*	20	

\*Students undertake 2 classes

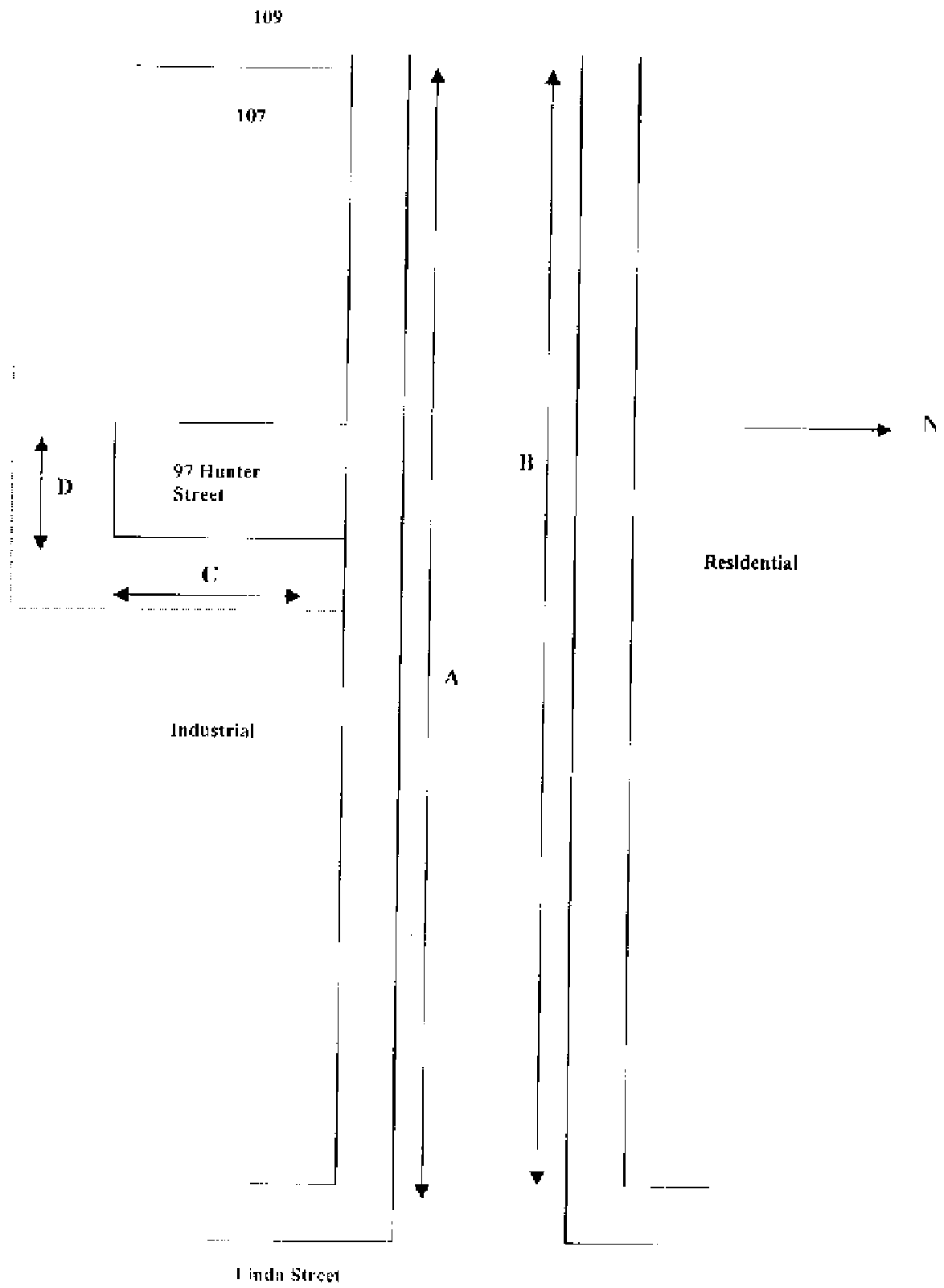
Saturday	8.30am – 9.30am	9.30am – 10.30am	10.30am – 11.30am	11.30am – 1.00pm	1.00pm – 2.00pm
	5 students	15 students	14 students	25 students	10 students

From the above table the peak hourly usage in respect to parking and traffic could be expected to be on a Monday and Wednesday

#### 4.1 Parking Survey

To further address the parking activity in the surrounding street system and at the site, a parking occupancy survey was undertaken on Monday, 28 July 2003 between 4pm-7pm. This time of the survey represents the peak activity level of the martial arts classes as mentioned above.

The parking survey involved the recording of the total numbers of vehicles parked in various areas every 15 minutes. The results are represented in Table 4.0 whereas Figure 3 provides details of the area of which the survey was undertaken.



LOCATION OF PARKING SURVEY  
FIGURE 3.0

**OCCUPANCY SURVEY**  
**Hunter Street Parking Survey (Linda Street to 109)**  
**Monday, 28 July 2003**

<b>Total Vehicles Parked in Each Area</b>															
Area	Street	Capacity	4.00-	4.15-	4.30-	4.45-	5.00-	5.15-	5.30-	5.45-	6.00-	6.15-	6.30-	6.45-	Av Occ
			4.15	4.30	4.45	5.00	5.15	5.30	5.45	6.00	6.15	6.30	6.45	7.00	
A	Hunter St (west side)	19	15	17	19	17	9	10	7	7	5	5	3	6	10
B	Hunter St (east side)	29	21	23	23	19	20	20	20	19	19	15	19	19	20
C	97 Hunter St (off street)	4	2	1	1	2	1	1	1	1	1	1	0	0	1
D	97 Hunter St (off street rear)	8	2	3	3	1	1	1	0	0	0	0	0	0	1
	<b>Total Parked</b>	<b>60</b>	<b>44</b>	<b>44</b>	<b>46</b>	<b>34</b>	<b>31</b>	<b>32</b>	<b>28</b>	<b>27</b>	<b>25</b>	<b>21</b>	<b>22</b>	<b>25</b>	<b>32</b>
	<b>% Occupied</b>		<b>73</b>	<b>73</b>	<b>77</b>	<b>57</b>	<b>52</b>	<b>53</b>	<b>47</b>	<b>45</b>	<b>42</b>	<b>35</b>	<b>37</b>	<b>42</b>	<b>53</b>

From the table it is evident that:

- Peak parking occupancy in the surrounding road system of Hunter Street occurs at 4.30-4.45pm where 42 out of the 48 spaces were occupied. A total of 6 spaces were therefore available on the street system during the heaviest demanded time of the academy.
- Parking activity declines significantly after 5.00pm due to close of the adjoining business as this is in an industrial area. The parking occupancy is subsequently reduced to between 34 and 21 in the ensuing 2 hours resulting in a spare capacity of the street system of some 14 to 27 spaces. This occurred during the 5.00pm-7.00pm period.
- Parking on the site is not heavy with a maximum of 4 out of the 12 spaces allocated being used. Furthermore, after 5.30pm only one parking space was used, once more indicating close of business and availability of parking for the academy.

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- During the 6.30pm-9.00pm classes, a maximum of 30 students attend from, which the mode of travel survey undertaken reveals that 42% are likely to come by car and park.

It could be calculated therefore that a maximum of 13 parking spaces would be required to cater for the students' parking demand. This should be qualified in that this would be a worst case scenario with an expectation that all the students that are enrolled actually turn up.

- There are 2 full-time staff on the site during the day with an additional 1 or 2 staff provided if need be on peak nights. Based on the abovementioned "mode survey, some staff will travel by other modes and therefore a total of 2 parking spaces is considered adequate for the staff parking.

The total parking requirements could therefore be expected to total 15 under this method of calculation.

From the above the overall parking requirement is still considered somewhat high and the parking impact should be viewed in light of the following:

- The Academy is well located in close proximity to public transport (rail and bus), a major shopping centre (dual trips) from which "walking" and "drop-off" modes of travel may increase in lieu of car driver parking.
- The time of highest demand of the Academy activities is between 6.15pm to 9.00pm. Parking surveys on the surrounding road system of Hunter Street has revealed that some 14 spaces or more are available at present on the western side and 9 spaces or more on the eastern side of the road showing considerable spare capacity.
- A total of 8 spaces on the site will be made available after 5.30pm to serve the needs of the Academy and will add to the already 4 spaces provided as part of the lease for this activity. A total of 12 parking spaces will be available on the site after 5.30pm and spare capacity will be available on the road system.
- The peak periods of the academy occurs only on 2 occasions being a Monday and Wednesday evening from which the parking demand may be up to 15 spaces. At other times the parking requirement would be significantly less.

## **5.0 TRAFFIC IMPLICATIONS**

The trip generation of the site will vary during the different times when the classes are operating. Based on the "mode of survey" questionnaire sheet, the following hourly trip rates have been derived these being the at the highest demanded time:

4.15pm - 5.15pm - 40 vehicle trips per hour  
6.30pm - 7.30pm - 13 vehicle trips per hour

The traffic impacts can be determined from the above and by taking into consideration the previous count data for Hunter Street which revealed an hourly traffic flow of 220 and 139 during the abovementioned times.

From these traffic movements it is able to be concluded that the development site will not impact on the operation of the surrounding road system.

## **6.0 ACCESS**

Access to and from the site is via a 6.0m wide driveway to Hunter Street and via a 6.0m wide driveway to Hunter Lane.

The dropping off or picking up of students is well catered for by either driving through the development site or by stopping adjacent the driveway adjacent to Hunter Street.

## 7.0 CONCLUSIONS

The following conclusions may be derived in respect to this proposal:

- The proposal is for the use of the second floor of 97 Hunter Street, Hornsby (285m<sup>2</sup> gfa) as a recreational facility for lessons in martial arts, stretching and posture and self defence.
- The development proposal is located within an industrial "B" zoned area and adjoins 2 other land uses on the site that operate during normal business hours. The proposed martial arts academy mainly operates during out of business hours.
- The development site has a two (2) access frontage being to Hunter Street and Hunter Lane and is provided with 12 parking spaces. A total of 4 parking spaces have been allocated to the Academy and it is proposed that the remaining 8 spaces accommodating the adjoining land uses be made available to the Academy during the evening periods after 5.30pm.
- The parking demand of the Academy, as a worst case scenario, is anticipated to peak at 15 spaces for 2 periods of the week, being on a Monday and Wednesday evening between 6.30pm to 8.00pm. At other times the parking requirement will be considerably less. Although there are only 12 parking spaces available on site, there is more than adequate space on the surrounding road system of Hunter Street to accommodate the 3 additional spaces on the two occasions of the week from which the peak demand occurs.
- The traffic generation of the site is maximised at 40 vehicle trips per hour for only one day per week. This traffic movement is only light and will not impact on the surrounding road system.
- There should be no significant effects from parking or traffic generation as a result of the proposed development.

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4<sup>th</sup> August 2013

To Whom it May Concern:

I the owner / manager of JEFF CARROLL MECHANICAL  
REPAIRS PTY LTD give  
permission to CCK Academy to use the parking spaces associated with our business for  
the purpose of parking during the night time activity after 5:30pm

Kind Regards

Jeff Carroll

JEFF CARROLL

**ATTACHMENT**