

CHAPTER 2.11 PARKING AND ACCESS

1.0 INTRODUCTION

Transport choice means choosing how we travel. People should be able to walk, cycle and use public transport for access to jobs, shops, schools and services and not rely solely on private cars. A choice of alternative transport may help the environment, provide more equitable access, and improve the liveability of our urban areas.

The way we plan for land uses and transport can increase the proportion of trips that can be taken on foot, by bicycle or public transport as people go about their daily tasks. When we plan for transport choice, we also help to manage the demand for travel by minimising the number and length of individual trips people need to make.

Local parking policy is an important tool in influencing the demand for travel and the mode by which it is undertaken. A Parking policy should, therefore, support planning policies that seek to improve access by walking, cycling, mobility scooters and public transport, especially in areas of higher demand such as major, town and local centres (see Chapter 5.1 - Retail Centres).

This Chapter is principally based on the relevant *Australian Standards/ New Zealand Standards* (AS & AS/NZS 2890), the Roads and Traffic Authority's (now Roads and Maritime Services) "Guide to Traffic Generating Developments" (October 2002 and as amended) and Austroads' "Guide to Traffic Management: Part 11 Parking". Adjustments have been made to take into account local factors based on surveys of particular types of development in Wyong Shire with the aim to encourage use of public transport, cycling and walking in areas of higher accessibility.

1.1 Objectives of this Chapter

To provide Council's requirements in relation to development for:

- the provision of parking;
- the design of parking, delivery, access and associated traffic facilities;
- the provision of traffic and transport infrastructure, including facilities for public transport, cyclists and pedestrians.

1.2 Land to which this Chapter Applies

This chapter applies to any traffic generating development and any development that has a need for parking, access, delivery and associated traffic facilities.

1.3 Glossary

Note: Generally, the terms used in this Chapter have the same meaning as those terms are defined within the WLEP 2013. Where a term is defined within the WLEP 2013, it is not repeated here. The following additional terms are relevant to this Chapter:

town centres are Wyong, The Entrance, Toukley, Lake Haven, Bateau Bay and Warnervale.

medical staff for hospitals and nursing homes means doctors and other specialist medical practitioners. It does not include Nurses, who are considered to be “employees”.

neighbourhood centres- the Wyong Retail Network is also supported by neighbourhood centres ranging in size from 100sq m up to 2,500sq m.

off-street parking refers to parking not within the road reserve.

overflow carpark is an area identified to accommodate carparking on special occasions (outside the normal requirements) and needs to be adequate for all weather but not necessarily sealed.

major centre is Tuggerah (as defined in Chapter 5.1 Retail Centres).

Traffic Impact Study is a study prepared in accordance with Appendix A of this Chapter

Transport Management Plan is a plan prepared in accordance with Appendix B of this Chapter.

local centres - San Remo, Budgewoi, Lake Munmorah, Ourimbah, Long Jetty, Wadalba, East Toukley, Killarney Vale and Chittaway Point.

2.0 APPLICATIONS

2.1 General Information Required with a Development Application

The details required with a development application will vary depending on the scale and type of development.

Where the development is of a small scale and with minimal traffic impacts, a parking plan and parking assessment based on this Plan are usually acceptable with a Development Application. These could be included in a section of the Statement of Environmental Effects that is submitted as part of the Development Application.

2.2 Transport Management Plan

Traditional traffic studies tend to extrapolate existing travel patterns and plan for increased road capacity to accommodate those trends, thus tending to favour private vehicle use over alternative transport modes. The emphasis now in NSW Government policy is to plan major developments and development in major centres for the management of travel demand as part of an integrated land use and transport strategy.

A Transport Management Plan aims to:

- manage the transport impacts of the development;
- encourage increased use of public transport, walking and cycling;
- reduce the potential growth in use of cars and commercial vehicles generated by the development;
- reduce the impact of freight transport, while allowing for efficient freight movement.

For all residential developments larger than a dual occupancy, or other development generating more than 20 one-way vehicle trips per day, a Transport Management Plan (TMP) prepared in accordance with Appendix B is required. For smaller developments, the TMP could be included in a section of the Statement of Environmental Effects that is submitted as part of the Development Application.

The TMP is to identify how those accessing the proposed development will be encouraged to walk, cycle and use public transport in lieu of the motor car. (Public transport includes bus, rail and taxis.) The TMP may identify and justify an appropriate parking ration for that particular development.

Where a proposed development is located in a major centre or a town centre, an applicant who prepares a satisfactory TMP may propose alternate parking ratios than those identified in Section 5 Table 1: Parking Requirements for Specific Land Uses.

2.3 Traffic Impact Study

For large-scale and/or more complex developments, which are likely to have a greater impact on parking demand and/or traffic movement, an appropriate Traffic Impact Study, including parking requirements, prepared by a suitably qualified consultant, is to be provided with the development application. This includes development proposals that generate 50 or more vehicle trips per hour and development proposals considered to be Traffic Generating Developments under Schedule 3 of SEPP Infrastructure. The issues to be addressed in a Traffic Impact Study are listed in Appendix A.

2.4 Consultation with the State Roads Authority

Under the requirements of State Environmental Planning Policy (Infrastructure) 2007, certain development applications are required to be referred to Roads and Maritime Services (RMS), for consideration and advice of RMS requirements. The type and size of development that is to be referred to RMS are listed in Schedule 3 of State Environmental Planning Policy (Infrastructure) 2007. All developments abutting classified roads will also be referred to RMS. However, Council may seek the comments from the RMS for any development where Council considers it appropriate.

2.5 Local Traffic Committee

Developments that require parking will generally require the installation of "Traffic Control Devices" (as defined in the Road Transport (Safety and Traffic Management) Act 1999). In accordance with the RMS "Delegations to Councils – Regulation of Traffic", proposals for the installation of traffic control devices, which includes signs and line marking, are to be referred to the Local Traffic Committee for consideration prior to issue of design approval (Construction Certificate or Roads Act).

3.0 DEVELOPMENT PROVISIONS - PARKING REQUIREMENTS

3.1 General

The parking requirements for a development include provision for cars, motorcycles, pedestrians, delivery vehicles, maintenance and service vehicles, emergency vehicles, buses, taxis and bicycles. Access and intersection details also form part of the parking requirements.

The details provided in this Chapter are considered to be minimum requirements as documented in AS/NZS 2890 and the Guide to Traffic Generating Developments. Developers are obliged to apply appropriate requirements which, in certain circumstances may differ from the minimum requirements.

An assessment showing the calculation of carparking requirements is to be provided with a development application. The required amount of carparking should be provided on the same site as the proposed development. The parking may only be provided on a site adjoining the proposed development if it is proposed to amalgamate the sites and the use of the land for the purpose of car parking is permissible under the relevant State or Local Environmental Plan.

Regular storage of non-operational motor vehicles is not permitted within the required number of parking spaces. Regular storage of waste bins, trailers, boats, caravans, signage, unapproved landscaping, or the like is not permitted within the required parking spaces.

3.2 Calculation of Carparking Spaces

OBJECTIVE

- To ensure that adequate off-street parking is provided for new development

REQUIREMENTS

- a The number of carparking spaces for a development is to be determined from Table 1. Where a variation to the number of spaces required in Table 1 is proposed, a TMP is to be provided and the reasons and justification for any variation are to be included in the TMP for Council's consideration.
- b Where the number of parking spaces required by this chapter does not equal a whole number, the number of spaces is to be rounded up to the nearest whole number.

Land Use	Parking Requirements
RESIDENTIAL ACCOMMODATION	
Dwelling House	<p>1 space per dwelling if 3 or less bedrooms</p> <p>2 spaces per dwelling if 4 or more bedrooms</p> <p>At least one fully enclosed garage carpark is required for new dwelling houses in urban areas</p>
Dual Occupancy	<p>1 space per dwelling if 3 or less bedrooms</p> <p>2 spaces per dwelling for 4 or more bedroom dwellings</p> <p>At least one fully enclosed garage per dwelling is required</p>
Multi Dwelling Housing and Residential Flat Buildings	<p>1 space per 1 bedroom dwelling</p> <p>1.2 spaces per 2 bedroom dwelling</p> <p>1.5 spaces per 3 (or more) bedroom dwelling</p> <p><i>Note: The above requirements may be reduced to 1 space per dwelling if development is in a major centre or a town centre, subject to submission of a Transport Management Plan and approval by Council.</i></p> <p>In addition, 1 space per 5 units for visitor parking with a minimum of 1 visitor space per development</p> <p>1 visitor space is to be available for car washing</p> <p>On average, only one space per unit is to be allocated as resident parking. The remaining spaces are to be provided as separate parking and available for common use at all times</p>
Housing for Aged or Disabled Persons	As per State Environmental Planning Policy (Housing for Seniors or People with a Disability)
Exhibition Home	<p>For single exhibition homes:</p> <p>1 on-site space for staff PLUS</p> <p>2 spaces on-site for visitors</p> <p>Spaces are not to be provided within the front building setback which includes setback to both streets on corner lots</p> <p>For an exhibition village, 2 off-street spaces per exhibition home</p>

Land Use	Parking Requirements
TOURIST AND VISITOR ACCOMMODATION	
Hotel, Motel and Serviced Apartments	<p>1 space per unit</p> <p>1 space for the manager PLUS 1 space per 2 employees</p> <p>Where other facilities are provided as part of the development (such as restaurants, conference and function rooms, etc.), allowance is to be made as specified in the relevant sections of this table.</p> <p><i>Delivery/Service Vehicle Requirements:</i> For accommodation units, 1 space per 50 units up to 200 units PLUS 1 space per 100 units thereafter.</p>
Boarding house, backpackers' accommodation and hostels.	<p>The greater of 1 space per 5 beds or 1 space per 8.5 beds plus staff parking (Staff requirements are 1 space for manager plus 1 space per 2 employees)</p> <p>1 space for a mini bus and service vehicles</p>
Bed and Breakfast Accommodation	1 space per visitor's bedroom PLUS 2 spaces for permanent residents
Caravan Parks and Camping Grounds	<p>1 resident parking space per caravan or camping site</p> <p>1 visitor parking space per 10 long term sites</p> <p>1 visitor parking space per 20 short term sites</p> <p>(Minimum of 4 visitor parking spaces)</p> <p>1 space for Manager PLUS 1 space per 2 employees*</p> <p><i>* Note: Rates for residents and visitors are set by Local Government (Manufactured Home Estates, Caravan Parks, Camping Grounds and Movable Dwellings) Regulation 2005.</i></p>
RECREATIONAL FACILITIES	
Tennis, Squash Courts	3 spaces per court
Bowling Greens	30 spaces for the first green then 15 spaces for each additional green
Gymnasium	7 spaces per 100m ² GFA
Golf Course	4 spaces per hole on the course
Sporting Fields	50 spaces per field
Swimming Pools	30 spaces per 500m ² GFA (water area only)

Land Use	Parking Requirements
HEALTH AND COMMUNITY SERVICES	
Medical centre or Health Consulting Rooms (not more than 3 health care professionals)	4 spaces per consulting room in R1 or R2 zone 3 spaces per consulting room in all other zones PLUS 1 space per employee (including professional staff) <i>Delivery/Service Vehicle Requirements:</i> 1 space per 2,000m ² GFA with a minimum of 1 space
Veterinary Hospital	As above.
Hospital	1 space per 2 beds PLUS 1 space per 2 employees PLUS Adequate spaces to be provided for staff <i>Service Requirements (including Ambulance):</i> 1 space per 2,000m ² GFA with a minimum of 1 space
Residential Care Facility (Nursing Home)	1 space per 5 beds PLUS 1 space per 2 employees PLUS Adequate spaces to be provided for staff <i>Service Requirements (including Ambulance):</i> 2 spaces
Child Care Centre	1 space per 4 children Temporary spaces in the driveway may be considered in the parking calculation provided they do not impede traffic flow to and from the site
School / Education Establishments	1 space per 1.5 staff PLUS 1 space per 100 students for visitors Minimum of 2 spaces for disabled students to be provided on site In addition, for High Schools / Education establishments, 1 space per 8 senior/adult students for student parking Bus standing areas, parent drop-off and set-down are to be provided subject to a Transport Management Plan based on anticipated mode split Adequate 'Kiss and Ride' facility is to be provided at all education establishments and is to be addressed in the TMP Provision of an easily accessible overflow carpark for special occasions on site (1 space per 5 students) <i>Service Requirements:</i> 1 space per 2,000m ² GFA
Place of Public Worship	1 space per 5 seats or 1 space per 20m ² (whichever is greater) 1 space for service vehicle Applicant to provide plan of proposed overflow parking for religious festivals
Community Facility: <ul style="list-style-type: none"> ▪ Hall ▪ Neighbourhood Centre ▪ Youth Centre 	1 space per 10 seats or 1 space per 20m ² (whichever is greater) Additional parking is dependent on location and size of centre and nature of activities provided 1 space is required for service vehicles depending on location and intended use

Land Use	Parking Requirements
COMMERCIAL PREMISES	
Business Premises - up to 200m ² GFA (provision of services directly to the public)	1 space per employee PLUS 1 space per 40m ² GFA (for clients), except in major centres (town and major) 1 space per 1.25 employees PLUS 1 space per 45m ² GFA (for clients) in major centres, provided that TMP approved by Council <i>Service Requirements: 1 space</i>
Business Premises - greater than 200m ² GFA (provision of services directly to the public)	1 space per 40m ² GFA <i>Service Requirements:</i> Up to 200m ² GFA - 1 space Greater than 200m ² GFA - 1 space per 2,000m ² GFA up to 20,000m ² then 1 space per 8,000m ² GFA thereafter
Office Premises (normal office density)	1 space per 40m ² GFA except in major centres 1 space per 45m ² GFA in major centres (town and major), provided that TMP approved by Council <i>Service Requirements:</i> Up to 200m ² GFA - 1 space Greater than 200m ² GFA - 1 space per 2,000m ² GFA up to 20,000m ² then 1 space per 8,000m ² GFA thereafter
Office Premises (Call-centres, data entry and uses with employment density greater than 1 employee per 15m ² GFA)*	1 space per 20m ² GFA except in major centres 1 space per 25m ² GFA in major centres (town and major), provided that TMP approved by Council <i>Service Requirements:</i> Up to 200m ² GFA - 1 space Greater than 200m ² GFA - 1 space per 2,000m ² GFA up to 20,000m ² then 1 space per 8,000m ² GFA thereafter <i>* Note: Increases may be imposed depending on the proposed use of the development, e.g. number of parking spaces will increase where continuity of shifts occur.</i>
Home Business	Minimum of one parking space per dwelling PLUS 1 space per non-resident employee PLUS 1 space per client using the site at any one time On street carparking can be assumed to provide 1 space per dwelling

Land Use	Parking Requirements										
RETAIL PREMISES											
Shops in Neighbourhood Centre*	1 space per 20m ² GFA <i>Service Requirements:</i> 1 space per 400m ² GFA										
Shops in a Local Centre*	1 space per 20m ² GFA <i>Service Requirements:</i> 1 space per 400m ² GFA up to 2000m ² GFA PLUS 1 space per 1,300m ² GFA thereafter										
Shops in Town or Major Centre* * Neighbourhood, Local, Town and Major Centres are as defined in the Retail Centres chapter of this DCP	<table border="1"> <thead> <tr> <th>For GFA (m²)</th> <th>Spaces/100m² (GFA) #</th> </tr> </thead> <tbody> <tr> <td>Up to 13,000m²</td> <td>4.7</td> </tr> <tr> <td>13,000-26,000m²</td> <td>4.3</td> </tr> <tr> <td>26,000-40,000m²</td> <td>3.3</td> </tr> <tr> <td>Over 40,000m²</td> <td>3.1</td> </tr> </tbody> </table> <p><i>Note:</i> Apply the requirement from the GFA grouping for the previous group that the development suits, then apply the remainder at the rate for the appropriate grouping e.g. a 28,000m² centre would require 4.3 spaces per 100m² up to 26,000m² then 3.3 spaces per 100m² for the remaining 2,000m².</p> <p># Parking rates may be reduced subject to approval of a TMP by Council</p> <p><i>Service Requirements:</i> 1 space per 500m² GFA up to 2,600m² GFA then 1 space per 1,300m² GFA thereafter</p>	For GFA (m ²)	Spaces/100m ² (GFA) #	Up to 13,000m ²	4.7	13,000-26,000m ²	4.3	26,000-40,000m ²	3.3	Over 40,000m ²	3.1
For GFA (m ²)	Spaces/100m ² (GFA) #										
Up to 13,000m ²	4.7										
13,000-26,000m ²	4.3										
26,000-40,000m ²	3.3										
Over 40,000m ²	3.1										
Service Station with Neighbourhood Shop (Convenience Store)	1 space per 20m ² GFA of convenience store Driveways to petrol pumps must provide sufficient space for a minimum of 2 cars to queue for each pump Space for refuelling tankers without impeding other traffic										
Car Tyre Retail Outlet	Whichever is the greatest of: 3 spaces per 100m ² GFA or 3 spaces per work bay <i>Service Requirements:</i> 1 space.										
Roadside Stall.	4 spaces if less than 20m ² GFA, then 1 space per 5m ² where > 20m ² GFA										
Landscape and Garden Supplies (Plant Nursery)	1 space per 30m ² retail space including outdoor display area PLUS 1 space per 2 employees Minimum 6 spaces plus spaces for cars with trailers										
Markets	2 spaces per stall for customers only										
Bulky Goods Premises (including Furniture, Carpets).	1 space per 50m ² GFA <i>Service Requirements:</i> 1 space per 2,000m ² GFA or 1 space for each separate unit in a development (whichever is greater)										
Hardware and Building Supplies	1 space per 50m ² GFA <i>Service Requirements:</i> 1 space up to 2,000m ² GFA then 1 space per 1,000m ² GFA										
Plant Hire Establishment	The greater of 6 spaces or 1 space per 100m ² of site area <i>Service Requirements:</i> 1 space per 800m ² of site area up to 8,000m ² then 1 space per 1,000m ² thereafter										
Land Use	Parking Requirements										

REFRESHMENTS AND ENTERTAINMENT	
<p>Take Away Food & Drink Premises:</p> <ul style="list-style-type: none"> ▪ With No Seating and No Drive Through ▪ With Seating and No Drive Through ▪ With Seating and Drive Through 	<p>12 spaces per 100m² GFA.</p> <p>The greatest of 12 spaces per 100m² GFA or 1 space per 5 seats (internal and external) or 1 space per 2 seats (internal)</p> <p>The greater of 1 space per 2 seats (internal) or 1 space per 3 seats (internal and external) Drive Through: queuing area for 10 car lengths. Queues must be able to extend an additional 2 car lengths without unreasonably disrupting carparking operations or extending into street. A minimum of 2 waiting bay spaces to pick up orders are required.</p> <p>Spaces may be required for buses and cars with trailers</p> <p><i>Service Requirements:</i> 1 space</p>
Restaurant and Function Centre	<p>15 spaces per 100m² GFA or 1 space per 3 seats, whichever is the greater</p> <p><i>Service Requirements:</i> 1 space per 400m² GFA up to 2,000m² GFA then 1 space per 1,000m² thereafter.</p>
Registered Club/Pub	<p>1 space per 5m² of licensed floor area (bar, lounge, gaming rooms) plus 15 spaces per 100m² GFA of dining areas plus 1 space per 15m² GFA of auditorium.</p> <p>Any outside areas where drinking/gaming is allowed should be included in the parking for the licensed floor area. Outside areas used for dining should be included in the parking for dining areas.</p> <p>Where accommodation is provided carparking spaces are to be provided in accordance with the provisions of this plan for motel/tourist accommodation.</p> <p>The provision of taxi, courtesy bus, public transport including a bus shelter, and patron pickup/drop off areas are to be addressed. Where courtesy buses are provided, a discount may be permitted.</p> <p><i>Service Requirements:</i> 1 space per 1,000m² GFA plus 1 space per 50 rooms</p>
Drive In Liquor	<p>1 space per 30m² GFA plus queuing area for 4 car lengths. Queues must be able to extend an additional 2 car lengths without unreasonably disrupting carparking operations or extending into street.</p> <p><i>Service Requirements:</i> 1 space per 1,000m² GFA</p>
Entertainment Facility and/or Cinema	<p>1 space per 10 seats</p> <p>The required number of spaces may be reduced in a major or town centre subject to approval of a TMP</p>

Land Use	Parking Requirements
INDUSTRIAL	
Industrial (including Unit Complex)	1 space per 100m ² GFA or 1 space per 2 staff (whichever is the greater) <i>Service Requirements:</i> 1 space per 800m ² GFA up to 8,000m ² GFA then 1 space per 1,000m ² GFA thereafter
Warehouse	1 space per 300m ² GFA <i>Service Requirements:</i> 1 space per 800m ² GFA up to 8,000m ² GFA then 1 space per 1,000m ² GFA thereafter
Material Recycling Depot	1 space per 200m ² of site area <i>Service Requirements:</i> Service area is to be of adequate size for appropriate trucks
Road Transport Terminal Transport Depot	1 space per 2 employees plus 1 space per vehicle associated with development at peak demand
Vehicle Sales, Vehicle Repair Station and Vehicle Body Repair Workshop	6 spaces per work bay <i>Service Requirements:</i> 1 space up to 2,000m ² GFA then 1 space per 1,000m ² GFA thereafter <i>(Note: for the purposes of this Chapter, work bay is considered any area where work is undertaken on a vehicle (including hoist, spray booth))</i>
<i>Note: The above values for industrial and warehouse activities are considered minimum requirements only and increases may be imposed depending on the proposed use of the development e.g. shift work, transport depots etc. Depending on the extent of offices etc. within the development, additional parking may be required in accordance with the requirements for Commercial Premises and/or additional servicing requirements for warehouse/transport depots etc.</i>	
OTHER USES	
Other Uses Not Listed Above, including but not limited to: Aerodrome, Heliport, Marina, Self Storage Establishment	To be assessed on merit having regard for this Plan

Table 1 Parking Requirements for Specific Land Uses

3.3 Dimensions of Parking Spaces

OBJECTIVE

- To provide for parking spaces and aisles in a development that are adequate and have appropriate dimensions for safe and efficient operation of the carpark

REQUIREMENTS

- All dimensions of parking spaces and aisles shall comply with AS 2890.1 and 2890.6 as a minimum. The "Classification of Off-Street Car Parking Facilities" shall be applicable for the type of development proposed.

- b For all residential dwellings and units a garage or enclosed carport is to have clear internal dimensions of a minimum of 3.0 metres × 5.4 metres (excluding support columns located away from car door access points).

3.4 Stacked Parking

OBJECTIVE

- To ensure that parking areas are designed in a such a way that vehicle movements both on-site and off-site are not impeded by parked vehicles

REQUIREMENTS

- a For dwelling houses, stack parking may be permitted in the front setback area provided that it does not extend beyond the property boundary and does not impact on sight lines, particularly on corner lots.
- b For dual occupancies, stack parking may be provided where it does not extend beyond the property boundary, and does not interfere with sight lines, parking or manoeuvring for other residents.
- c With the exception of dwelling houses and dual occupancies, stack parking will not be recognised for the purpose of carparking calculations.

3.5 Delivery / Service Vehicles and Emergency Vehicles

OBJECTIVE

- To provide for the safe and efficient operation of delivery/service vehicles and emergency vehicles.

REQUIREMENTS

- a Requirements for delivery/service vehicles and other vehicles unless identified in this chapter, are to be based generally on the Roads and Traffic Authority “Guide to Traffic Generating Developments” and the Australian Standards relating to the specific needs of each development. Regard needs to be given to the type and scale of the development. Some details are provided in Table 1; however a statement is required with the application establishing the needs of the particular development.
- b Manoeuvring and reversing areas for delivery/service vehicles are not to conflict with general parking and pedestrian requirements.
- c Provision should also be made for appropriate access for emergency vehicles.

3.6 Bus and Coach Parking

OBJECTIVE

- To provide for adequate and safe access and parking for buses and coaches

REQUIREMENTS

- a Large developments, such as shopping centres (town or major), schools, sporting complexes and tourist resorts require parking on-site for regular passenger buses (and taxis), shopper-coaches, tourist coaches etc. Parking for sufficient numbers of vehicles at convenient places (usually at main entrance points) should be provided on-site. These facilities should be safe, functional and conveniently located especially where used by the disabled and aged. They may also include appropriate shelters.
- b Setting down and picking up may be permitted on street where legally permitted, however, parking of buses must be provided on site. Bus facilities should also be designed to cater for any future growth or increased demand for bus services.
- c Refer to AS 2890.2 and to the *Austrroads Guide to Traffic Management* for all requirements for bus parking facilities. Variation/additions to these standards may be required if coaches are likely to use the facilities.

3.7 Parking and Access for the Disabled

OBJECTIVE

- To provide for the safe access and parking for people with a disability

REQUIREMENTS

- a Parking for people with a disability is to be located as close as possible to the nearest access for the disabled within a particular building. The path of travel from the parking area is to be a safe route with adequate width, manoeuvring, circulation area and gradients to allow satisfactory access, as a minimum in accordance with AS 1428.1. If possible, this access path should be covered for all weather use.
- b The total number of accessible carparking spaces for the disabled required for a development is dependant on the total number of carparking spaces provided within the carpark and the building classification of the building that the carpark is intended to service. The ratio of disabled carparking spaces to the total number of carparking spaces provided is to be determined in accordance with the Building Code of Australia (BCA), Volume 1. However, where this results in only one space being required and there is a likelihood of more demand or a demand from different sources such as a school where there may be a need for staff and visitors the number of spaces shall be increased.
- c The design of the accessible parking spaces is required to comply with the provisions of AS/NZS 2890.6– Parking facilities for people with disabilities.
- d All parking spaces for the disabled are to be appropriately and effectively marked and identified.
- e Ramps should be provided at locations that are easily accessible and provide appropriate, coherent and direct connectivity.

3.8 Bicycle Parking

Provision of adequate bicycle parking and facilities on site encourages trips by cycling and reduces the potential demand for carparking.

OBJECTIVE

- To provide safe access and adequate facilities for cyclists

REQUIREMENTS

- a Consideration is to be given to the type of parking facility to be provided, the security arrangements, access and ease of use, having regard to the anticipated users and their length of stay.
- b Bicycle parking facilities can be classified into three categories according to level of security – bike racks, lockers or a locked enclosure. Racks are more suitable for customers on a short visit to the development, but they do not prevent vandalism/theft of accessories. Lockers provide the most security but they require management of their use and are most suited to employees or regular clients. Locked enclosures are reasonably secure if they are provided in a basement carpark or a similar enclosed space. Details of these facilities are to be provided with the development application.
- c Bicycle parking areas should be provided where passive surveillance will frequently occur providing a reasonable level of security.
- d For residential flat development comprising six or more dwellings and where resident carparking for the development is provided in a common carpark area, bicycle parking facilities shall be provided at a rate of one per three dwellings.
- e For any other type of development (excluding residential) bicycle parking facilities shall be provided at a rate of one bicycle space per ten car spaces.
- f In addition to bicycle parking facilities, showers and clothes lockers should be provided at developments that could generate a significant number of employee cycle trips. *Planning guidelines for walking and cycling* (DIPNR, 2004) estimates that at least 3-5% of journey-to-work trips might be cyclists. These facilities would also be used by outdoor staff and staff involved in sporting activities.

Note: Refer to AS 2890.3 - Bicycle parking facilities and to the Austroads Guide to Traffic Management for design requirements for bicycle parking facilities. Planning guidelines for walking and cycling (DIPNR, 2004) provides advice on effective implementation of bicycle parking and end-of-trip facilities.

3.9 Motorcycles and Motor Scooters

Provision of adequate motorcycle/motor scooter parking on site will encourage trips that use less road space and consume less energy than trips by private car.

OBJECTIVE

- To provide for safe access and parking for motorcycles and motor scooters

REQUIREMENTS

- a Parking is to be provided at a ratio of at least 1 motorcycle space per 50 car spaces. The minimum dimension for a motorcycle space is 2.5m x 1.35m.
- b Motorcycle parking areas should be provided where passive surveillance will frequently occur providing a reasonable level of security. Consideration should be given to access and ease of use for motorcycles, having regard to the anticipated users and their length of stay.

3.10 Visitor Parking

Visitor parking is generally required to be provided for multiple dwelling residential development and tourist accommodation, as well as establishments such as hospitals, nursing homes and Government Agencies.

OBJECTIVE

- To provide for safe access and parking for visitors

REQUIREMENT

Visitor parking is to be provided in accordance with Table 1 as required. Parking for visitors (general public) is to be accessible at all times and external to any security arrangements.

3.11 Dual and Complementary Use of Facilities

For large scale multiple use developments, dual and complementary uses of parking areas may warrant a reduction in the cumulative parking allowances.

OBJECTIVE

- To allow applicants the ability to reduce parking numbers where a dual or complimentary use of facilities within a development is proposed

REQUIREMENT

- a Where dual and/or complementary use of facilities within a development is expected to reduce the total parking demand, this should be identified in the Traffic Impact Study/Traffic Management Plan with specific details for justification for any discount in parking numbers for consideration by Council.
- b Where it is proposed to use this approach it is recommended that applicants contact Council to discuss whether the proposal is appropriate for adjustment in carparking requirements prior to preparation of the final design or lodgement of a development application.

3.12 Change of Use or Additions to Existing Development

OBJECTIVE

- To ensure that a development that is proposed to be expanded or undergo a change of use will provide adequate access and parking

REQUIREMENTS

- a Where a use is to be changed to another similar use generating no increase in the peak volume of traffic and parking requirements and has the same traffic characteristics, including delivery/service vehicle requirements, and no structural alteration, extension, enlargement or rebuilding is proposed, no additional parking provision is required.
- b Where extension, expansion or enlargement of an existing development is proposed, this Chapter is to apply to the parking requirements for the proposed extension of the development.

- c Where a change of use for an existing development is proposed, not generating a similar volume of traffic or with different traffic characteristics, this Chapter will apply for the whole of the new use.

3.13 Special Events or Regular Casual Uses

OBJECTIVE

- To ensure that safe and efficient access and parking are provided for special events and regular casual uses

REQUIREMENTS

- a Organisers of special events (such as Mardi Gras, Parades, Festivals etc.) or regular casual uses (such as Circuses, Fairs, Annual Festivals, religious festivities etc.) are to provide details to Council on how the demand for carparking will be met, e.g. provision of overflow carparks, and how any special provisions for parking will be implemented.
- b A traffic management plan may be required for any event that is likely to have a significant impact on safe traffic movement and efficient parking. This includes special events and the opening period of the development and peak trading times if applicable.
- c For special events appropriate details are to be provided addressing pedestrian access to and from the site, routes to and from public transport, and pedestrian safety.

3.14 Contributions to Satisfy Carparking Requirements

OBJECTIVE

- To ensure that parking is provided through Development Contributions for those developments that do not provide the required amount of on-site parking

REQUIREMENTS

- a Parking required to meet demand is expected to be provided on site. However, where an appropriate Section 94 Contributions Plan for Carparking is in place and the required amount of carparking for a development is not able to be provided on site, Council may permit the payment of a contribution for the number of parking spaces that are deficient. This will depend on the availability of other parking options as determined by the relevant Section 94 Contributions Plan and a satisfactory proportion of spaces being provided on-site.
- b A voluntary planning agreement for a major development may propose the provision of the required number of parking spaces on a site that is accessible to the development, including facilities that improve pedestrian access between the parking area and the development. The developer would need to submit a Traffic Impact Study and TMP that demonstrate that the impacts of such a proposal would be acceptable.
- c Although the customers of such development may find it more convenient to use short-term on-street parking spaces, the Traffic Impact Study and TMP should ensure that:
- i long-stay parking for staff is provided on-site or in an off-street parking area;
 - ii any demand for on-street parking is compensated by provision of off-street spaces (or payment of a contribution for such spaces).

4.0 DEVELOPMENT PROVISIONS – ACCESS DESIGN

4.1 General Design Guidelines

This section deals with the design of the access to the development and internal access and parking areas within the development.

Safety is a major consideration in planning and designing a carpark and access to the development. This is influenced by the legibility and coherence of the layout of loading areas, vehicle access routes, pedestrian routes and desire paths, generally being a path of the most easily navigated direct route between an origin and destination.

Cars, delivery and service vehicles, other vehicles (e.g. buses, bicycles, mobility scooters) and pedestrians are to be accommodated by off-street access and parking provisions located close and convenient to the development. Complex or large car park layouts and/or accesses/intersections to developments would benefit from and in some instances will require a formal Road Safety Audit in accordance with Austroads guidelines. Such an audit may dictate major revision to the layout of the development.

For smaller or less complex layouts, the principles of road safety should be applied in the design process.

Development applications are to include details of parking area layouts, including accesses, intersections, general gradients, pedestrian facilities, traffic and speed control devices, landscape areas, acoustic treatments and lighting (where applicable). The following factors are to be addressed as a minimum:

- the type and characteristics of the road fronting the development and the access point/s;
- sight distances for all users;
- intersections/accesses;
- potential conflicts of users;
- stormwater management (quality and quantity);
- adjoining infrastructure, intersections, accesses etc;
- gradients where such information is critical in assessing the development;
- vehicle turning path including overhangs and setbacks/clearances for specific manoeuvres. These will vary significantly for different development types and motorists.

4.2 Details Required in Parking Design

OBJECTIVE

- To ensure that parking designs for a development include adequate information for the assessment of the parking requirements of that development

REQUIREMENT

Carparking designs, to scale and dimensioned, should include:

- a property boundaries;

- b parking space dimensions and any pillar encroachment details;
- c turning paths for the different design vehicles, with appropriate clearances. Vehicles may require an envelope greater than specified in AS 2890 due to drivers with potentially impaired sight/judgement;
- d aisle width;
- e disabled spaces;
- f vehicle circulation;
- g clear and obvious circulation patterns;
- h clarity at intersections:
 - i no intersection legs are to be less than 70 degrees or greater than 110 degrees; and
 - ii no "Dead Areas" are permitted;
- i access into major carparks are to provide long aisles prior to the provision of parking spaces so not to stop vehicle flow due to manoeuvring backing up into the access/intersections;
- j traffic and speed control devices;
- k pedestrian requirements, including safe pedestrian movement through the carpark to the entry of the development;
- l delivery and service vehicle requirements. Avoid conflicts with other users, pedestrians, cyclists and general parking. Entry and departure to delivery/service areas to be in forward direction only;
- m bicycle requirements;
- n signage, pavement marking and raised pavement markers;
- o gradients and cross falls;
- p sight distance availability and compliance with AS 2890.1, as a minimum. Increased reaction time or other user characteristics or site constraints may warrant increased requirements;
- q provision of shade trees and landscaped areas (including irrigation systems);
- r shopping trolley bays where appropriate;
- s acoustic treatments;
- t headlight barriers;
- u pavement types;
- v lighting – where applicable. Lighting design should consider the mature height of all proposed tree planting and comply with the relevant standards for overspill lighting to adjoining properties;
- w access to parking areas;
- x queuing areas and grade;

- y security;
- z column locations;
- aa vertical clearance – see requirements for disabled parking spaces;
- bb vehicle overhangs/ wheel stop requirements. Eliminate damage to landscaping and interference with pedestrian routes;
- cc ramps – gradients, widths and alignments. Two-way curved ramps are not supported;
- dd locations of nearby intersections, traffic facilities and/or accesses that adjoin or are close to the proposed carpark.

4.3 Access Design

OBJECTIVE

- To provide for safe and efficient access to the development and operation of the carpark through adequate design, gradient and dimensions of accesses and access intersections

REQUIREMENTS

- a The location of access points to developments and their carparking is critical and needs to be carefully selected based on a number of criteria. The design of accesses to off-street parking areas, queuing areas, etc shall comply with AS 2890.1, the RTA's (RMS) "Guide to Traffic Generating Developments" (October 2002 and as amended), Austroads Guide to Road Design and Council's Civil Works – Design Guideline and Construction Specification.
- b Safety is a primary consideration in planning for development. In this regard the safety aspects of all users are to be carefully considered and the development access/es are to be designed accordingly.
- c Sight distances at driveway exits is to be in accordance with the Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections Table 3.2 Safe Intersection Sight Distance with 2.5 secs for rural and 1.5 secs for urban locations unless otherwise conditioned due to existing or potential area demographics. It is to satisfy the 85th percentile speed of the through vehicles.
- d Where a range of widths are shown for accesses, the maximum width is to be used. This may differ depending on turning requirements of the design vehicle.
- e Parking areas with boom gates or locked gates operated by key pads or similar should have a queuing length sufficient to accommodate the peak demand without adversely affecting traffic or pedestrian movements on the frontage road, with a minimum queue length of two vehicles (12 metres) and not exceeding 10%. The grade at the key pad or similar (control point) is not to exceed 5%. A Traffic Impact Study should determine the length of the queuing area by consideration of the traffic volume in the frontage road, the capacity and design of the parking area, likely peak flow and access time at entry/exit gates.
- f For smaller parking areas with gated entries, AS 2890.1 is to be used to provide guidance on the queuing length for such facilities, which should allow for a minimum of two cars (as specified above).
- g The gradient of the access driveway should be less than 5% between the edge of the frontage road and the property line. If the queuing area slopes, the gradient between the property line and the vehicle control point should also be less than 5%.

4.4 Manoeuvring

OBJECTIVES

- To ensure that parking areas and access ways are designed for safe and efficient manoeuvring of vehicles
- To limit the number of manoeuvres when entering and exiting a development

REQUIREMENTS

- a All developments shall be designed so that entry and exit from parking areas to a public road is in a forward direction excepting:
 - i single dwelling houses; and
 - ii dual occupancies (side by side) located on residential streets with traffic volumes less than 2,000 vpd (Category C roads).
- b For developments where carparking is proposed along or at the end of a common driveway, or access handle/right of way, an adequate manoeuvring area must also be provided on-site so that the vehicles of residents can enter and leave the site in a forward manner using no more than a 3 point turn.
- c Particular attention is to be given to circulation within the parking area and to the facilities required to ensure that a safe and efficient circulation pattern is achieved. Right of way at intersections is to be clearly defined. There should be no accesses or intersections with adjoining roads with angles less than 70 degrees or greater than 110degrees.
- d Turning areas are to be designed in accordance with *AS 2890* (section 2.4). Generally, the maximum widths identified for accesses are to be used (sections 2.5 and 3.2). Potentially impaired eyesight/judgement or other user characteristics may warrant increased requirements, particularly with developments for seniors.

4.5 Parking in Building Setbacks

OBJECTIVES

- To provide setback areas that allow for an attractive streetscape and local environment
- To minimise stormwater runoff from parking areas, driveways and accesses within the building setback

REQUIREMENTS

- a For dwelling houses:
 - i parking within the front setback on the driveway may be used to constitute at least one of the required spaces; however a carport over this space(s) will not be approved within the front setback area;
 - ii carparking must be designed so that vehicles can access the space in one movement;
 - iii the area of parking hardstand is to be minimised within the front setback area to limit stormwater run-off and improve stormwater quality through infiltration into turfed and

landscaped areas. Note that a larger area can be obtained through the use of permeable concrete, asphalt pavers or plastic modular pavers.

- b Carports shall be:
 - i located behind the front building line; and
 - ii of a design, roof alignment, materials and colour(s) compatible with and complementary to the dwelling.
- c Carports will generally not be approved within the front setback area. In exceptional circumstances only, Council may consider such proposals on individual merit. An exceptional circumstance may include where it can be demonstrated that no physical opportunity exists for the provision of other accessible vehicular protection on a site. The applicant would be required to demonstrate that the design, materials and colour(s) proposed in such a case would be complementary to the dwelling and that adequate vegetative screening can be provided and maintained adjacent to either side of the structure.
- d For other types of development, parking within front setback of the property for any category road will not be permitted.
- e Parking may be permitted within a side or rear building setback provided that suitable landscaping and acoustic treatments are provided along such a boundary to ameliorate the impacts.

4.6 Delivery and Service Vehicle Requirements

The type, size and frequency of delivery and service vehicles for a development are to be identified. This should include the details of the likelihood of multiple deliveries and services occurring concurrently. Service areas are to be designed to suit the particular vehicles and operations in the service areas.

OBJECTIVE

- To provide for the safe and efficient operation of delivery and service vehicles through the appropriate location and design of loading bays, service areas and access ways in a development

REQUIREMENTS

- a There must be adequate provision made for the manoeuvring, loading and unloading of vehicles on the site. Ensuring the safety of the public and employees is maintained is the major consideration in the design of loading and service areas. Conflicts with other users, pedestrians, cyclists, general parking and manoeuvring areas as well as associated accesses are to be avoided.
- b The development is to provide satisfactory on-site areas for delivery and service operations. On street loading/off loading will not be permitted.
- c Service areas are to be defined areas that are generally not to be used for any other purpose.
- d Delivery/service vehicles are to be separated from other uses (such as pedestrians, cyclists and cars).
- e Entry and departure to delivery/service areas are to be in a forward direction only.
- f Any reversing of delivery/service vehicles is to be performed in areas remote from pedestrians, cycle and car movements. The design vehicle shall be able to manoeuvre into and dock with its service bay with only one reverse movement and without the vehicle infringing the boundary of the service area.

- g The internal accesses are to be sized to cater for manoeuvrability of the largest vehicle likely to utilise the area or the vehicle likely to require the largest manoeuvring area.
- h Access for emergency vehicles is to be provided and maintained at all times.
- i Designs for commercial and industrial developments are to identify the location of loading facilities. Where internal loading bays are proposed, minimum opening height of 3.5 metres is required. This shall be increased, depending on size of the largest anticipated vehicle.
- j All industrial and commercial developments have a need for access by delivery/service vehicles. As a minimum, these developments are to provide loading facilities for a small rigid vehicle (SRV). Loading bays for SRV's are to have minimum dimensions of 6.4 metres x 3.5 metres. Where larger than small rigid vehicles are anticipated, provision must be made for that size vehicle supported by documentation from goods suppliers as to the size of vehicles that will service the development.
- k Where a town or major centre is adjacent to a B-Double route, provision is to be made for B-Double access, manoeuvring and parking of trailers including uncoupling areas/s. Details of such arrangements are to be submitted for Council and RMS approval.

Note: AS 2890.2 provides further information on the requirements of delivery vehicle areas. These will vary depending on the vehicles to be accommodated and the geometry of the loading area/s.

4.7 Materials

OBJECTIVE

- To ensure that the materials and construction of parking areas (including loading areas) and accesses are adequate for the intended loading and operational conditions of the carpark.

Note: Refer to Council's Civil Works - Design Guideline and Construction Specification for further details regarding pavements, construction and material requirements.

REQUIREMENTS

- a For any parking areas and accesses the materials of construction are to have regard for the applicable intended loadings (including increased loadings for tight turns), pavement design life and surface and sub-surface drainage. A non-slip finish is to be provided. Decorative treatments are to blend with the surrounding development and landscaping but they should not mask the pavement markings. The kerb types in parking areas are to be low enough to permit vehicle overhang where designed, but provide approved wheel stops. Concept details are to be provided with a development application.
- b The surfaces are to be either concrete or sealed in accordance with Council's Civil Works - Design Guideline and Construction Specification. For minor parking areas in rural areas, Council may not require sealing of a carpark provided it is stable, dust free, does not present a slip hazard and is suitable for all weather.
- c Carpark pavements should be designed by a geotechnical or structural engineer taking into account soil conditions, soil permeability (in the case of porous pavements) and reactivity. Details of proposed finishes and construction details (including the results of geotechnical investigations and a pavement design report) are to be incorporated in the Construction Certificate.

4.8 Signage and Pavement Marking

OBJECTIVE

- To ensure that the signage and pavement marking for parking areas comply with RMS "Signs Database" and "Delineation"

REQUIREMENTS

- a Parking areas shall be delineated with approved standard signs and pavement markings as a minimum. These are to comply with RMS "Traffic Signs Database" and "Delineation Manual"). Additional signage and pavement marking may be required to convey information relating to the facility to carpark users. Raised pavement markers may be required to reinforce the line marking.
- b Visitor parking spaces, spaces for the disabled and spaces for mothers with prams are to be clearly delineated with pavement marking and signage.
- c For larger developments generally exceeding 20 parking spaces, signage and pavement marking plans are to be submitted for consideration by the Local Traffic Committee.

4.9 Pedestrian Facilities

OBJECTIVE

- To provide for the safe movement of pedestrians and the provision of pedestrian facilities within parking areas

REQUIREMENTS

- a There are to be well-defined and obvious pedestrian lines/facilities in parking and access areas. In the design of accesses, internal roads, loading areas and parking areas, conflicts with pedestrians are to be avoided. Facilities which cater specifically for pedestrians, such as pedestrian crossings, raised crossings, pedestrian islands and signals, shared traffic zones and other pedestrian facilities are to be identified and implemented so that pedestrian access is delineated and the priority is placed upon their safe movement in the parking area.
- b Pedestrian footpaths are to be provided in large carparks i.e. carparks with more than four rows and/or more than 40 metres in length. Signage directing pedestrians to the paths is also to be provided. Vehicle overhang, signposts and landscaping are to be located so as not to conflict with pedestrian movement.
- c Adequate sight distance throughout the development and associated accesses is to be provided to improve the safety of pedestrians. This is to include sight distance from pedestrians to vehicles and vice versa.
- d If the development is to operate after dark, lighting in accordance with the AS/NZS 1158.3.1, *Lighting for roads and public spaces – Pedestrian area lighting*, is to be provided. Any impacts on adjoining properties should be managed and the requirements of AS 4282 should be satisfied. Lighting considerations should include the provision of LED lighting, part/full solar power supply or other current sustainable lighting options.
- e Kerb stops may be required where overhang of vehicles will inhibit the pathway for pedestrian use.

- f The above requirements are also applicable for carparks where there has been a change of use for the development irrespective of the traffic volumes or characteristics of the proposed development.

4.10 Shopping Trolleys

OBJECTIVES

- To allow for shopping trolleys to be collected and stored so that they do not impede the safe and efficient movement of pedestrians and vehicles
- To provide shopping trolley facilities that encourage their return to trolley bays

REQUIREMENTS

- a Shopping trolley collection bays are to be provided in all local, town and major shopping centres as a minimum.
- b Shopping trolley bays are to be provided so that no parking space is more than 20 metres from a trolley collection bay.
- c Systems should be implemented to contain shopping trolleys to the site (and associated parking areas) of the shopping centre that provides them.

4.11 Landscaping

OBJECTIVES

- To ensure that developers consider landscape design in association with proposed parking areas as early as possible to reduce their visual impact
- To encourage adequate landscaping in parking areas to provide shade cover for 50% of the carpark in the long term

REQUIREMENTS

- a Parking areas are to be landscaped appropriately, while providing adequate vision for all users. Landscaping is to be maintained so that site lines are not impeded.
- b Landscaping is required along accesses and carparks where they adjoin private property.
- c In large carparking areas, such as those in shopping centres, the provision of shade trees, with appropriate species selection, is mandatory. An adequate provision would be one shade tree per four parking spaces and the minimum provision should be one tree per six spaces. The aim of the landscape plan should be to provide shade cover for a minimum of 50% of the paved area of the carpark after 15 years of suitable growing conditions.
- d Kerbs and clearances from vehicle doors are to be provided to prevent vehicles from damaging the landscaping or hitting trees, islands or walls and overhangs of footpaths. It should be noted that radiated heat from vehicle engines causes significant damage to landscaping. Adequate setbacks are required to provide separation of landscaping from radiated heat.

- e All clearances to vehicles, pedestrians, cyclists, etc is to be from the mature size of the proposed landscaping. Should an appropriate maintenance plan be provided such clearances may be reduced to provide for landscaping pruning.
- f Any lighting is to be designed to allow for the mature height of the landscaping.

4.12 Stormwater and Water Sensitive Urban Design

OBJECTIVES

- To ensure that stormwater systems for parking areas are designed to minimise the downstream impacts of stormwater and to control the water quality
- To ensure that carparks and their drainage systems are designed to minimise water nuisance such as flows across pedestrian routes or ponding along them

REQUIREMENT

Requirements for drainage and Water Sensitive Urban Design are specified in Council's Civil Works – Design Guideline and Construction Specification.

4.13 Safer by Design

OBJECTIVE

- To ensure that carparking areas and pedestrian facilities are designed to reduce the opportunities for crime and anti-social activity

REQUIREMENT

The design of carpark and pedestrian facilities is to have regard for the NSW Police Service "Safer By Design" Principles, which include:

- a opportunities for natural and or technical surveillance;
- b appropriate access control;
- c territorial reinforcement;
- d appropriate space management.

APPENDIX A TRAFFIC IMPACT STUDY

As part of the Study, a report is to be prepared by a Traffic Engineer, who is or is entitled to membership of the Australian Institute of Traffic Planning & Management (AITPM). The Traffic studies are to be carried out at the developer's expense.

A1 Issues to be Addressed

The report is to include but not be limited to:

- a identifying the existing and proposed road network (including pedestrian and cycle facilities) and its conditions:
 - i road layouts;
 - ii available horizontal and vertical sight distance at access points;
 - iii proximity of the proposed access points to other existing accesses or intersections;
- b identify carparking supply and demand (on-street and off-street);
- c identify public transport routes and services, bicycle paths and desire lines for bicycles and mobility scooters and pedestrian paths and desire lines;
- d details of proposed development, including the size of areas for each particular type of use within the development, and access arrangements;
- e determine what impact the traffic generated by the development will have on nearby streets (including formal and informal "kiss and ride" areas or proposals); and intersections;
- f determine proposed improvements to access and circulation, public transport services and bicycle, mobility scooters and pedestrian facilities;
- g determine number and type of parking spaces required in accordance with this Chapter;
- h provide recommendations for the management of impacts from the development;
- i justification for any reduction in the number of parking spaces required for reasons identified in the Transport Management Plan (Appendix B), or for any other reasons such as "shared use" or provision of courtesy bus etc.

A2 Parameters to be included in the Report

- a Study area is to be identified. It should be large enough to include all significant impacts of the proposed development. At a minimum, the area should include the adjacent controlled intersections.
- b Time frame - Projected traffic demands should be based on fully occupied conditions. For multi-staged developments, traffic demands at the end of each stage should be determined.
- c Any analysis is to include a background traffic growth extrapolated for 10 years and is to include pedestrian movements, school traffic, programmed traffic/transport improvements, future developments and other miscellaneous factors should be considered where appropriate.
- d Road safety audit.

- e Any other traffic related issues or concerns identified by Council staff.

A3 Outline of Traffic Impact Report

A3.1 Introduction

- a Identifying who did the report and for whom.
- b Description of study area.
- c Description of proposed land use and building floor space in development, including details of respective floor areas.
- d Identification of peak hours and whether weekday or Saturday, to be used as the most critical time for the development. Two sets of analysis may be required. One for the peak time of the development operations and a second for the peak time of the surrounding road network.
- e Location of proposed access points.

A3.2 Base Traffic Conditions

- a Description of road network and intersections in vicinity of site specifically at the access points.
- b Traffic volume and intersection counts are to be carried out during peak-impact hours. This generally requires both AM and PM counts. Dates and times of surveys are to be identified.
- c Gap times and queue lengths occurring during the surveys are to be identified for correlation.

A3.3 Site Traffic Generation

- a Trip generation rates used and source.
- b Traffic generated during peak-impact hours by the development.

A3.4 Site Traffic Distributions

- a Method used.
- b Table or figure showing estimated site traffic movements by direction.
- c Discussion of method used for traffic assignment and assumptions used for assignment of traffic to network.

A3.5 Non-Site Traffic Projections

- a Definition of design year - opening of proposed development.
- b Identification of developments in study area whose traffic is to be included in impact calculations.
- c Adjustment of background through traffic volumes for 10 year projection, using Council/ RMS growth rate.

A3.6 Traffic Assignments

- a Assignment of peak period development traffic to intersections and access points.
- b Volumes for existing peak traffic hours, plus projected background volumes, plus development traffic. Total traffic volumes for each movement are to be provided, with the breakdowns.
- c Recommended access design and improvements.

A3.7 Assessment

- a Assessment of traffic impact by proposed development on adjacent and nearby intersections and roads to be carried out using SIDRA.
- b In some instances analysis using PARAMICS or other Council/RMS accepted software may be required.
- c Electronic copies of all analysis are to be submitted to Council with the Report.

A3.8 Review of Site Plan

- a Internal capacity at access points.
- b Sight distances available at access points and their conformance with the requirement criteria identified in this Chapter.
- c Parking layout and whether it meets the criteria identified in this Chapter.
- d Loading dock locations and access, including design truck used and turning templates. Loading docks are to be separated from pedestrian movements and general parking.
- e Recommended changes.

A3.9 Summary of findings and recommendations

The final report should include all assumptions and data used in the technical analysis. Any recommendations in the report should be reviewed by Council staff before presentation at a public meeting.

Consultants are invited to discuss proposed projects with Council's Development Assessment and/or Transportation Planning Group prior to commencing the report. Doing so will provide an opportunity to discuss and determine parameters to be used and open a communication link between Council staff and the developer/consultant.

APPENDIX B TRANSPORT MANAGEMENT PLAN

A Transport Management Plan is required for all residential developments larger than a dual occupancy, or other development generating more than 20 one-way vehicle trips per day. It is to be prepared by a suitably qualified consultant, who is or is entitled to membership of the Australian Institute of Traffic Planning & Management (AITPM).

The Transport Management Plan is to identify how people from the proposed development will be encouraged to walk, cycle and use public transport in lieu of the motor car. Public Transport includes Bus, Rail and Taxi.

The Transport Management Plan is to address the following:

B1 Is the proposed development well-located to reduce the need to travel, and does it encourage access by public transport, walking and cycling?

- What is the likely catchment area for employees and customers?
- What proportion of employees/customers is likely to live within walking/cycling distance and a single public transport journey?
- What are the likely destinations of residents?

B2 Is the proposed development designed to encourage access by public transport, walking and cycling?

- How will the development connect to existing pedestrian, cycle and public transport routes?
- How does the design of the development provide for pedestrians?
- How does the design of the development relate to adjacent developments to facilitate multi-purpose trips?
- Has adequate consideration been given in the design of the development to the safety of vehicle passengers and pedestrians (including people with disabilities) and cyclists?
- Will this development encourage pedestrians to cross busy roads at uncontrolled intersections?

B3 Is the existing public transport network appropriate to serve the site and how can its use be encouraged?

- Is there a need for diversion or extension of an existing bus route (or a new bus route) to serve the development?
- Are bus shelters, seating and lighting for new or existing bus routes in the vicinity of the development site existing or provided?

B4 How will the demand for parking be managed on or off the site?

- Is there a claim for a reduction in the parking requirements due to shared uses, provision of courtesy buses or because of the location of the development near a public transport node?
- Is parking designed and located to enhance the streetscape?
- Is bicycle parking provided?
- Is motorcycle parking provided?
- Are showers, change rooms and lockers provided for staff in accordance with DOPI/RMS document - Planning Guidelines for Walking and Cycling?
- Will a workplace travel plan be prepared and provided to the development occupiers/users?

Addressing the above concerns may identify justification for a reduction in the number of parking spaces provided within the development.

Consideration should be given to reducing the demand for travel and hence parking for the private car for larger developments by providing a shuttle/mini bus service to nearby railway stations and/or major destinations.