Section 2 Traffic impact studies.

2.1 Introduction.

This section looks at traffic impact studies and the key issues of their use. It is important to ensure that all relevant traffic impacts are identified and assessed. The findings of a traffic impact study may be used for local development control, ensuring the provision of a safe and efficient road system.

2.2 What is a traffic impact study?

A traffic impact study is a simplified technical appraisal of the traffic and safety implications relating to a specific development. The information provided in the study report should enable the relevant authorities (i.e. council and the RTA) to assess the traffic impact of a development.

Information collected in such studies should reflect the size and type and location of the development as well as its relationship to surrounding developments and the adjacent transport network.

The following outlines issues to be addressed in traffic impact studies:

- existing proposals for improvements to the adjacent road network and hierarchy.
- impact on road safety.
- impact of traffic noise.
- AADT-- annual average daily traffic. It is the estimated yearly total of traffic movements divided by 365.
- examine volumes and historical trends on key adjacent roads.
- peak period traffic volumes and congestion levels at key adjacent intersections.
- existing parking supply and demand in the vicinity of the proposed development.
- existing public transport services in the vicinity of the proposed development.
- parking provisions appropriate to the development (in relation to demand and statutory requirements).
- traffic generation / attraction and trip distribution of the proposed development.
- safety and efficiency of internal road layout, including service and parking areas.
- impact of generated traffic on key adjacent intersections, streets in the neighbourhood of the development, the environment and other major traffic generating development sites in close proximity.
- safety and efficiency of access between the site and the adjacent road network.

All proposed developments listed in Schedules 1 and 2 of SEPP 11 require referral to either a Regional Development Committee or a Council Development Committee.

(See Section 9, Appendix B).

2.2.1 Schedule 1 developments.

In most situations, a traffic impact study is required for developments listed in Schedule 1. In circumstances where the impact on traffic will be minimal, a statement relating to the impact of development on traffic is sufficient. Developments involving transport terminals, bulk stores and liquid fuel depots, or small developments with low traffic movements into and out of the site, are examples of developments that may require a traffic impact statement.

Consider the following factors when planning Schedule 1 Developments.

Location.

The impact of a development varies depending on whether it is located in an urban or rural environment.

Existing infrastructure.

The introduction of heavy vehicles into areas such as the inner city with its narrow road widths would have substantial impact.

Developments in sensitive areas.

Any development with a higher generation rate than the existing adjacent developments, will have an impact on the environment and amenity of the affected area.

2.2.2 Schedule 2 developments.

The scale of the development is the major determinant of whether a traffic impact study is required for developments listed in Schedule 2. As a minimum requirement, driveway location and design and the internal site layout should be investigated.

Schedule 2 developments which require a detailed traffic impact study are:

- clubs and licensed premises.
- drive-in take away food outlets.
- service stations and convenience stores.

2.3 Issues to be addressed.

A traffic impact study should follow the standard format and structure that is listed in Table 2.1. This format covers the key issues to be addressed in determining the impact on traffic of a development. Use of this format and the checklist will ensure those involved in the preparation and / or assessment of Development Applications that the most significant matters are considered.

Table 2.1
Key issues in preparing traffic impact studies

Procedures & Key Parameters	Source	Check✓
Brief description of the development		
Application and study process		
Introduction		
Background		
Scope of report		
The key issues and objectives of a traffic impact study		
General Data Collection / Existing Conditions		
Description of the Site and Proposed Activity		
Site location		
Current land use characteristics (zoning) of the proposed site and land use in the vicinity	Development Consent Authority	
Site access		
The Existing Traffic Conditions		
Road hierarchy; including the identification of the classified road network (major and minor roads) which may be affected by the development proposal	Council / RTA	
Inventory of road widths, road conditions, traffic management and parking control	Council / RTA and Survey	
Current and proposed roadworks, traffic management works and bikeways	Council / RTA	
Traffic Flows		

Procedures & Key Parameters	Source	Check✓
Selection of key streets - possibly divided into the major and the minor road network; selection of key assessment periods, chosen to cover the times at which the development would be expected to have its major impacts	Section 3	
AADT on key streets	Council / RTA and Survey	
Daily traffic flow hourly distribution, particularly in or near residential areas	Survey	
Estimate of the speed of traffic on the road to which vehicular access is proposed	Survey	
Current traffic generation of site	Survey	
Daily and peak period heavy vehicle flows and percentages	Survey	
The adaptation of appropriate computer models or techniques for assessing levels of traffic congestion and queuing conditions		
Traffic Safety		
Accident history of road network in the area	Council / RTA	
Parking Supply and Demand		
On-street parking provision	Council	
Off-street parking provision	Council / Survey	
Current parking demand, including utilisation by time of day and turnover rates	Survey	
Short term pick up and set down areas	Council / Survey	
Modal Split		
Public Transport		
Rail station locations	State Rail / Cityrail	
Bus routes and bus stop locations; Pedestrian access to bus stops; Constraints and conflicts	STA / Private Operators / Council / Survey	
Rail and bus service frequencies, ideally separated into Monday to Friday, Saturday and Sunday, for both peak and off-peak times	State Rail / Cityrail / Survey	

Procedures & Key Parameters	Source	Check✓
Commuter parking provision	State Rail / Cityrail / Survey	
Pedestrian Network		
Identify major pedestrian routes	Survey	
Pedestrian flows and potential conflicts with vehicles, particularly where such conflicts cause capacity constraint on either vehicular or pedestrian movement	Survey	
Pedestrian infrastructure	Survey	
Proposed developments in the vicinity		
Proposed Development		
The Development		
Plan reference, if plans not contained in study report		
Nature of development		
Gross floor areas of each component of development		
Projected number of employees/users/residents		
Hours and days of operations		
Staging and timing of development		
Selection of appropriate design vehicles for determining access and circulation requirements	Section 6	
Access		
Driveway location, including review of alternative locations	Sections 5, 6	
Sight distance of driveways and comparisons with stopping and desirable minimum sight distances	Section 6	
Service vehicle access	Section 6	
Analysis of projected queuing at entrances	Section 6	
Current access to site and comparison with proposed access		
Provision for access to, and by, public transport	Section 6	

Procedures & Key Parameters	Source	Check✓
Circulation		
Proposed pattern of circulation	Section 6	
Internal road widths	Section 6	
Provision for bus movements	Section 6	
Service area layout		
Parking		
Proposed supply		
Parking provision recommended by State Government policy	RTA / DUAP	
Council code and local parking policies and plans	Council	
Parking layout		
Projected peak demand, based where appropriate on similar research reports and on surveys of similar developments;	Section 5	
Parking for Service / courier vehicles and bicycles	Section 5	
Impact of Proposed Development		
Traffic generation during design periods		
Daily and seasonal factors		
Pedestrian generation and movements		
Traffic Distribution and Assignments		
Hourly distribution of trips		
Assignments of these trips to the road system based where possible on development feasibility studies or on origin/ destination surveys undertaken at similar developments in the areas		
Impact on Traffic Safety		
Assessment of Road Safety Impact		
Impact of Generated Traffic		
Daily traffic flows and composition on key streets and their expected effect on the environment particularly in residential areas		

Procedures & Key Parameters	Source	Check✓
Peak period volumes at key intersections and effect of generated traffic on congestion levels	Survey	
Impact of construction traffic during construction stages		
Other proposed developments in the vicinity their timing and likely impact, if known		
Assessment of traffic noise		
Public Transport		
Options for extensions and changes to bus routes and bus stops following discussions with the STA and or private bus operators	STA / Private Operators	
Provision for pedestrian access to bus stops		
Recommended Works		
Improvements to site access and circulation		
Improvements to roads, signals, roundabouts and other traffic management measures		
Improvements to pedestrian facilities		
Effect of recommended works on the operation of adjacent developments		
Effect of recommended works on public transport services including access to bus routes and bus stops		
Provision of LATM measures		
Funding of proposed improvement projects		
Noise attenuation measures		