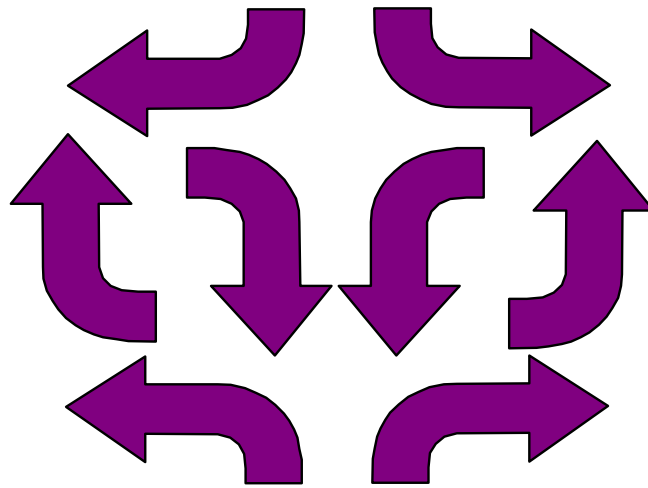


---

# Parking Standards & Provisions Review



February 2000

---

# Parking Standards & Provisions Review

*Prepared by:*

**James Douglas & Associates Pty. Ltd**

**Planning & Development Consultants**

*92 Calais Road  
Wembley Downs  
Western Australia 6019  
Telephone (08) 9245 1616*

**Consultant in Association**

**Tony Peters Traffic Safety Consultant**

*39 High Street  
Bellerive  
Tasmania  
Telephone (03) 62441305*

**Sub -Consultant**

**Myriad Consultancy Market Research Consultants**

*P.O. Box 1000  
Rosny Park  
Tasmania  
Telephone (03) 62442807*

**Disclaimer :**

The information contained in this report and its related attachments has been compiled with all due care. However this information has been collected for the purposes outlined in the Project Brief and not as a basis for testing individual project feasibility or for any other purpose. Therefore, no person should reproduce or act on this information without prior verification and approval.

**This work is copyright.**

## Table of Contents

1. Introduction.....	4
1.1 Purpose of the Study .....	4
1.2 Background .....	4
1.3 Objectives .....	5
2. Approach .....	6
2.1 Scoping .....	6
2.2 Research .....	6
2.3 Surveys & Investigations .....	7
2.4 Analysis .....	9
3. Research.....	10
3.1 Summary of Previous Studies .....	10
3.2 Description of Existing Scheme Provisions and Associated Issues.....	28
3.3 Examples of Policies and Standards Applied Elsewhere .....	32
4. Surveys & Investigations.....	47
4.1 Review of Requirements to Protect Heritage and Streetscape Values.....	47
4.2 Review of Requirements for 'Equal Access' and Bicycle Parking.....	49
4.3 Review of Sites Identified as Suitable for 'Public' Car Parking .....	55
4.4 Survey of Parking Generation for Specific Land Uses .....	61
4.5 Survey of Parking Generation at Suburban Shopping Centres.....	83
4.6 Survey of Shopping Patterns at Suburban Shopping Centres.....	94
4.7 Demographic Indications of Parking Demand .....	102
5. Analysis.....	105
5.1 Format for Proposed Policy and Standards.....	105
5.2 On-Site Parking and Access Provisions.....	107
5.4 Guidelines for the Assessment and Provision of Off - Site Parking.....	119
6. Recommendations .....	123
6.1 Proposal for a new Parking and Access Schedule .....	123
6.2 Data Base.....	138
References .....	139

## Appendices

- 1: Table 1-Planning Scheme Car Space Provisions
- 2: Table 2-Driveway Construction
- 3: Table 3-Bicycle Space Parking Provision

# 1. Introduction

## **1.1 Purpose of the Study**

The Hobart City Council has commissioned this study to review the existing parking and access provisions that apply within the area subject to the City of Hobart Planning Scheme for new developments and to recommend new provisions that are suitable for inclusion within any new City of Hobart Planning Scheme.

## **1.2 Background**

The existing parking and access provisions of the City of Hobart Planning Scheme have been in force for over twenty years. When introduced, the provisions were generally representative of existing practice in Hobart and other Councils however, they were not supported by any comprehensive assessment of parking generation for various developments. Since that time, the nature of development in the City, the way that people use buildings and the values that they hold important, have changed. It is appropriate therefore to now review the various relevant development standards to see if they remain applicable to current patterns of development and use.

In many instances, on-site parking cannot be provided, or its provision would impact upon heritage or other streetscape values, especially where development is occurring within an existing streetscape fabric. Alternatively, some unique developments may not require the number of spaces identified in on-site parking standards for that use category. In such instances it is necessary to establish a process for assessing variations in on-site parking provisions and for managing off-site parking supply (ie. car spaces available in public car parks and in the street).

The Study has focused on the area currently covered by the existing Hobart City Planning Scheme 1982 with the exception of the Hobart Central Business District since on-site provisions and cash-in-lieu of parking are not applied within this area. The area subject to the Sullivans Cove Planning Scheme is also not included. The existing parking and access provisions of the Hobart City Planning Scheme are however applicable to the Battery Point Planning Scheme and it is envisaged that any new provisions would be applied within the area of this Scheme.

### **1.3 Objectives**

The following objectives for the Study have been established based upon the required outcomes of the Project Brief and research into the issues relevant to the introduction of new provisions.

#### **The Study should:-**

- have regard to the current approaches to car parking and access provisions in statutory planning both in Tasmania and nationally;
- review the survey work done in the last 10 years by Council in relation to the existing standards;
- consider cultural heritage values and the character of the City's built environment in relation to parking and access provisions;
- consider the requirements for access for people with disabilities and bicycle parking provisions;
- survey the car parking demand generated from a range of specific land uses; and
- examine mechanisms for providing for parking demand other than through on-site requirements.

#### **The proposed provisions should:-**

- be performance based, allowing for variations in prescribed standards providing predetermined performance criteria are met;
- be supported by a relevant data base;
- be easily interpreted, providing both as much certainty in development outcomes **and** the flexibility to allow for variations in on-site standards when merited;
- provide a clear policy framework on which to base judgements in regard to the application of the provisions and the determination of variations from the usual standards; and

- 
- include mechanisms for managing off - site parking supply by monitoring the number of spaces available within the vicinity of a development and considering the overall supply of spaces available within the vicinity when assessing on - site parking requirements.

## 2. Approach

The Study has comprised the following stages:-

### **2.1 Scoping**

Initial consultations were held with the Project Management Team and other Council staff to confirm the scope and approach of the project, issues to be addressed, relevant resource documents and consultation requirements.

### **2.2 Research**

- **Summary of Previous Reports**

Various studies have been completed by Council regarding parking and access provisions for a number of precincts throughout the City. Surveys have also been conducted in respect to the parking and access impacts for specific use categories. This existing body of knowledge has been summarised and the findings and recommendations have been assessed for their relevance to the establishment of on-site standards and the management of off-site parking supply.

- **Description of the Existing Scheme Provisions relating to Parking and Access**

The various scheme provisions relating to parking and access have been summarised and the issues and problems arising from the application of the various provisions have been examined.

- **Examples of Policies and Standards applied elsewhere**

Current practice examples have been selected from Cities which were considered to be most relevant to the population size and infrastructure scale of the City of Hobart.

For each source Council, parking policies and on-site standards were identified to enable comparisons of the various provisions as they currently apply with those for Hobart.

- **Comparison between Hobart's on-site parking standards and the RTA Guide**

Research of national reference material established that the New South Wales Road Traffic Authority document "Traffic Generation Characteristics of Developments" contained the most recent and comprehensive traffic and parking data. A comparison of the RTA data with Schedule E -Parking and Access Provisions, of the Hobart Planning Scheme is included to

identify differences between it and Hobart's current practice and to identify particular use classes which require further investigation.

## **2. 3 Surveys & Investigations**

- **Review of requirements to protect heritage and streetscape values**

Council's Heritage Gardens Study for New Town and Lenah Valley identified landscaped places of heritage significance. The process involved in that study has been extended to include an assessment of the impact of carparking and access infrastructure upon the retention of cultural heritage values. The site assessments undertaken for the Gardens Study were supplemented by consultations with the Heritage Council and by interviews with Council's Heritage and Planning Officers to identify specific provisions for parking and access relating to sites listed as places of cultural significance or within Heritage Areas identified in Schedule F of the Scheme.

- **Review of requirements for 'equal access' and bicycle parking provisions**

Consultations have been undertaken with Council Engineering staff and Council's representative on the Equal Access Committee to identify any problems with the application of the existing provisions for disabled parking.

A review of the relevant Australian Standards and the Equal Access Committee's document "Making Access Happen - A Guide To Developing Disability Discrimination Act Action Plans For Local Government" was undertaken to identify standards and policies suitable for inclusion within the proposed provisions.

With regard to planning for bicycle parking, the Hobart City Council 'Bike Plan' and the 'Clarence City Council Municipal Bicycle Plan' were reviewed to identify relevant policies and development standards for bicycle parking provisions based on research within Tasmania and nationally.

- **Review of Sites identified as suitable for 'public' car parking**

A number of potential locations for off street public car parks were identified in three previous studies:-

- The North Hobart Car Parking Investigation 1993;
- The Sandy Bay Car Parking Investigation 1993; and
- Frame District Parking Project 1988.

All sites in the North Hobart and Sandy Bay Study areas (where car parking developed from cash-in-lieu funds is most likely) were assessed for their practical utilisation as car parks and other site options were considered. The carparks identified in the Frame District Project in areas of high priority for a parking provision, were inspected to determine if they were still vacant and available for future use.

- **Survey of parking generation for specific land uses**

The data and standards identified in the previous research were tested and where appropriate, calibrated by field surveys for local conditions.

The following methods were used to test the efficacy of the various on-site parking requirements:-

- sample field counts of pedestrians and drivers entering a sample of suburban shopping centres;
- traffic counter measurements of discreet residential areas;
- sample studies of selected development's parking supply and demand characteristics;
- studies of selected developments to identify user requirements and expectations; and
- technical evaluation and consultations with Council officers with regards to the design requirements for driveway access, parking spaces and manoeuvring areas.

- **Survey of shopping patterns at Suburban Shopping Centres**

The cordon surveys described above included three suburban shopping centres:-

- South Hobart (Cascade Road);
- Lenah Valley (Augusta Road); and
- Lower Sandy Bay (Sandy Bay Road).

In order to better understand how these centres function in terms of shopper activity and parking demand, face to face interviews were conducted with shoppers and shop owners/operators. The interviews were conducted on-site via face to face intercept with a random selection of a cross section of respondents. The target quota was 300 respondents, made up of equal numbers from each of the centres.

The field observational surveys were conducted over a six day period from Thursday 17<sup>th</sup> June to Wednesday 23<sup>rd</sup> June 1999 at prescribed periods to capture shopping peaks and troughs.



---

- **Review of demographic indicators of parking demand**

A review of existing data sources was undertaken to identify parking demands indicated by the degree of private car dependency and transportation modes used for the trip to work utilising the Australian Bureau of Statistics data.

## **2.4 Analysis**

The data and issues identified by the above research were analysed to define the appropriate form and content for the proposed new Parking and Access Schedule. It was determined from the analysis that the new performance based Schedule should contain the following elements:-

- **Framework for proposed Policy and Standards**

A comprehensive policy framework has been developed which identifies the objectives of the proposed provisions and the issues which are relevant to any assessment of the performance of parking and access provisions.

- **On-site Parking and Access Provisions**

A set of 'Acceptable Solutions' for on-site parking and access standards has been developed for specific uses where it is considered to be desirable to contain all parking generation on-site.

- **Performance Criteria for Variations in On-Site Standards**

Performance Criteria have been established for alternative parking/access provisions where it is necessary or desirable to vary the normally applicable standards for on-site parking and access or where there are no specific standards relative to the proposal. The performance criteria determine the level of performance that must be achieved but allow flexibility in the means of meeting these criteria.

- **Procedure for the establishment & assessment of off-site parking proposals**

Where it is determined that on-site standards should not or cannot be applied, a procedure has been developed for applicants to assess alternatives and for Council to determine the merit of the alternative proposals. These Criteria comprise the following:-

- Determination of parking and traffic generation rates;
- Traffic Impact study (refer to page 121 of this report) assessment;
- Definition of Parking Precincts (defined as: areas of land use which can reasonably be expected, or in practice would, share the parking supply contained within that area - where parking supply includes both on-street and off-street parking); and
- Parking Partnerships define the process by which Council could administer private and public parking within the context of a defined Parking Precinct.

---

## 3. Research

### **3.1 Summary of Previous Studies**

Various studies have been completed by Council regarding parking and access provisions for precincts such as the Frame District surrounding the CBD, North Hobart, Sandy Bay and Sullivans Cove and as part of an integrated plan for the Central Business District (CASP). Other reports have also been conducted by Council in respect to specific use categories such as the "Housing 2000" Project which analysed the adequacy of provisions for multi-residential use. This existing body of knowledge has been summarised and the findings and recommendations have been assessed for their relevance to the establishment of on-site standards and the management of off-site parking supply.

#### **Policy Review Study - Car Parking Provision in Multi-Unit Developments - 1988**

- Summary

The primary concern of this report was to test the adequacy of parking provisions under the 1982 Parking and Access Codes. In order to gain an insight into the level of parking provisions, as seen by the residents of multi-unit developments, a questionnaire was sent to the residents of 138 units in multi-unit developments constructed under the 1982 Planning Scheme and 145 units constructed under the 1976 Planning Scheme. The neighbours of the surveyed multi-unit developments were also surveyed to assess their impressions on the impact on street parking amenity. As well, on site observations were carried out on the actual on site parking for the listed developments.

- Project Aims/Objectives

To review car parking standards within multi-unit developments as provided under the 1982 City of Hobart Planning Scheme with specific attention to:-

- detailing car parking allocations within multi-unit developments as provided under both the 1976 and 1982 Parking and Access Codes;
- identifying significant patterns of parking space usage within multi-unit developments; and
- highlighting any areas of the 1982 Parking and Access Code which are - inadequate to meet current demand or are otherwise inappropriate.

- Conclusions

Whilst it was concluded that the 1982 Planning Scheme Parking and Access Standards satisfy the current demand for parking within multi-unit developments it was also noted that the application of the Code produces a surplus of parking supply. However, it was felt that there could be a danger in reducing the Scheme's parking supply requirement as any unforeseen future change in unit occupancy type could create a greater parking demand - eg. unit resident change from elderly to family.

- **Recommendations**

As a consequence of the survey findings and the concern for unpredictable future occupancy type it was recommended that no change to the multi-unit development parking requirement be made.

### Frame District Parking Project, 1988 (consultant/author Ian Sansom)

- **Summary**

The need for the study stemmed from the difficulty the Corporation experienced in dealing with parking requirements for development proposals, where a loss of historic value could result. The report covers general parking issues, identifies parking opportunities in selected areas of the Frame District and reviews the Corporation's existing parking policies as contained in the Parking and Access Code of the then Draft City of Hobart Planning Scheme, 1982.

- **Project objectives**

1. Identify areas in the Frame District where parking is physically difficult to provide or would be environmentally degrading and where there is, or is likely to be changes of use to more intensive activities.
2. Identify the manner in which existing parking spaces are used, being those allocated to specific uses.
3. Identify any inadequacies of the City of Hobart Planning Scheme and especially the existing Parking and Access Code.
4. Identify options to resolve the problem of insufficient parking in areas of recent, current and future pressure for change to more intensive uses.
5. Identify appropriate policy changes in respect of parking in the Frame District, particularly in relation to the number and type of spaces that should be required, the provision of centralised or shared facilities, situations where cash-in-lieu of parking is appropriate, and

the provision of parking and/or cash-in-lieu in the case of historic buildings and Conservation Zones.

- **Study area**

The study area covers the area of transition from commercial to residential use surrounding the CBD. It is referred to as the Frame District under the City of Hobart Planning Scheme 1982 and shown in map 1 within the report.

- **Conclusions and Recommendations**

**Conclusions**

The commercial areas were generally well into their transition to commercial use, although the change appeared slow and incremental. Some properties provided an insufficient number of parking spaces according to the Council's requirements, others provided an excess. Parking for work vehicles did not appear to be a problem for most operations and the situation suggests that on-site parking for business is not a large problem in the Frame District (probably due to choice of a property appropriate to the particular business operation).

Most parking conflicts principally involved commuters, residents and the short term requirements of business. Commercialisation of the areas was predicted to increase the parking problems such as:-

- insufficient on-site parking;
- commuter parking pressure on-street and in surrounding residential areas;
- shortage of short-term on-street parking and abuse of parking restrictions; and
- pressure which could result in the location of parking areas.

**Recommendations/actions**

- make a commitment to the recommendations of the 1984 Cycleway study;
- continue investigation and provision of the resident parking permit system;
- make a commitment to the provision of local central car parks, in accordance with identified requirements and opportunities and explore the possibility of joint car park developments with the private sector;
- initiate a regional investigation into the provision of centralised suburban commuter car parks while investigating and implementing methods to encourage car pooling;
- seek amendment to the relevant Acts to facilitate compulsory acquisition of property on which to provide parking;

- include vehicles servicing business in the existing parking meter permit system and investigate the Launceston City Council system with a view to implementation;
- accept responsibility for enforcement of traffic restrictions;
- establish a technical advisory committee to continue the research and planning and adopt a more direct role in the development of commercial areas;
- only accept cash in lieu where parking exists or can be provided which is reasonably accessible to the development and continue to supply long term parking (greater than four hours duration);
- remove the clause that allows heritage considerations to be the basis for exercising discretion on car parking but ensure that this does not undermine the heritage /townscape values of the site/area;
- amend the Principles of Development Control, to clearly state the objectives to be satisfied with regard to vehicle access and manoeuvring and that parking provision is to match the type of demand generated, and not create conflict; and
- amend the Parking and Access Code to give it greater flexibility and remedy the identified weaknesses.

### Central Area Strategy Plan (CASP) Draft Strategy & Parking Topic Report, 1991

- **Summary**

As of 1991, Hobart had about 7300 parking spaces of which 1400 (19%) were on-street and 5900 (81%) were off-street spaces. The Council is the largest single supplier of parking with about 3400 (46%) of all parking spaces, the majority of which are for short term use by shoppers.

- **Project aims/objectives**

To provide a strategy to guide and manage development and enhancement of the central area for the next 10 years, as a result of concerns regarding the future role of the central area as the principal administrative, commercial and shopping centre of the State. These concerns reflected pressure due to increasing competition from the large suburban centres, and among other issues, access and parking difficulties.

- **Conclusions and Recommendations**

**Policy**

The maintenance of an adequate supply of short term car parking which is easily accessible to drivers will be ensured.

### **Actions**

1. The addition of further storeys to the Council's Argyle Street multi-storey car park station will be given first priority followed by increasing the capacity of the Centrepoint (West End) parking station.
2. The loss of any on-street parking in the City Heart as part of City Heart Revitalisation pedestrian environment improvement works will be compensated by programmed expansion of the Council's multi-storey car park stock of spaces.
3. Any long-term car parking spaces provided by Council within the City Heart part of the Central Area will be progressively phased out unless required for emergency and security services or other strategic purposes.
4. The parking supply and demand situation in the Central Area will become subject to regular review by Council in conjunction with the City Heart Business Association.
5. The purchase or lease of the Trafalgar on Collins car park will be considered by Council as a means of maintaining and increasing the supply of short term car parking in the Central Area.
6. Further options for the location of an additional multi-storey car park station will be investigated by Council.

### **Cycling Facilities Policy (C2)**

1. Cycle parking facilities will progressively be incorporated into all Council car parks.
2. The appropriate provision of cycle parking will be evaluated as part of the detailed planning of footpath widening, the Mall refurbishment and other capital works projects in the Central Area.
3. An amendment to the City of Hobart Planning Scheme 1982 will be initiated to require cycle parking as a part of all major new developments.
4. Incorporating the provision of change and shower facilities for cyclists (and joggers) in any works on Council car parks will be investigated.

5. The proponents of significant new developments will be encouraged to provide change and shower facilities for their tenants and staff who cycle or jog to work.

### ***Implementation***

1. The addition of two further storeys to the Council's Argyle Street multi-storey car park station was completed in 1997. An investigation into the possibility of increasing the capacity of both Centrepont and Argyle Street parking stations, has also been investigated, as has the possibility of extending the Argyle Street car park.
2. City Heart Revitalisation pedestrian environment improvement works will be compensated by programmed expansion of the Council's multi-storey car park stock of spaces.
3. Any long-term car parking spaces provided by Council within the City Heart part of the Central Area will be progressively phased out unless required for emergency and security services or other strategic purposes.
4. The parking supply and demand situation in the Central Area will become subject to regular review by Council in conjunction with the City Heart Business Association.
5. Further options for the location of an additional multi-storey car park station will be investigated by Council.

### **Sandy Bay Car Parking Investigation 1993**

- ***Summary***

The report investigates:-

- existing supply of and demand for parking facilities including detailed spatial and time analysis of observed demand;
- the Council's existing cash-in-lieu of parking policy, reviewing the history of administering this policy in Sandy Bay Shopping Centre and suggesting a possible future course of action for the Council;
- the attitudes of Traders and their Customers by way of interview questionnaire surveys; and
- the possibilities for parking improvement in the immediate, medium and long term.

- **Project aims/objectives**

Report goals were:-

- to generate an updated council car parking policy for the Sandy Bay commercial area, aimed at providing a satisfactory level of parking access for users; and
- to make recommendations for the provision, management and funding of car parking in the centre.

- **Conclusions and Recommendations**

Overall, it was seen that the Sandy Bay Centre was coping well with the parking demand placed on it. However, the Purity front car park, Sandy Bay Road (especially the block to the north of King Street) and to a lesser extent Magnet Court, were all experiencing demand above 85%.

**The recommendations are:-**

**Improved pedestrian amenity**

- provision of a set of lights at the Russell Crescent/Sandy Bay Road junction.

**Improved management of existing parking**

- enable Council officers to police the major car parks in order to eliminate long stay parking;
- erect a standard parking sign with an arrow indicating the entry into the Purity deck car park in King Street;
- obtain agreement from Purity on the erection of a sign in the front car park indicating that parking is available in the deck car park;
- initially remove the entry arrow at the King Street entrance to Purity front car park;
- subsequently initiate discussions with the relevant agencies/businesses in relation to removing the access from King Street into the Purity front car park and allowing egress only. Purity management has indicated interest in this proposal; and
- provide conspicuous advance signage of the access to the Mayfair car park.

**More parking**

*On-street options*

- creation of two or three spaces in Sandy Bay Road outside Fanny's coffee shop and LJ Hooker;
- creation of fourteen spaces in King Street by making it one way (westbound) between Sandy Bay Road and Princes Street;



- creation of two or three spaces on the south side of King Street by reducing the length of the queuing lane into the Purity deck car park by two to three spaces; and
- creation of two spaces in Princes Street by relocating the “15 minute” and “no parking” signs outside KFC in Princes Street, 10m further east.

*Off-street options*

- acquisition of no 57 queen street - demolition of house to provide 20 spaces;
- acquisition of no 48 King Street (Kingsway Motors) conversion of ground floor to 35 spaces;
- acquisition of no 159 Sandy Bay Road (now Yeltuor site).
  - i. retain building and parking as is (8 spaces)
  - ii. demolish building and enlarge car park (15 spaces)
  - iii. redevelop site with new building along Sandy Bay Road frontage, car park at rear with access via no 52 king street (8 spaces)
  - iv. as per (iii) but develop access via the rear of no 149 SB road (Mobil service station) through demolition of the Scout Hall and acquisition of vehicular right of way over 149. Relocation of HEC substation (15 spaces)

- **Outcome**

Council is pursuing many of the major initiatives that were identified. In the interim, several small scale projects have been undertaken to increase the amount of available parking space in Sandy Bay. As well, the front car park at Purity Sandy Bay now stipulates a two hour parking limit which is patrolled and enforced by council parking officers, and clearly marked.

### North Hobart Car Parking Investigation 1993

- **Summary**

The report assesses car parking availability and any related problems arising in the North Hobart commercial area. The area is subject to Council’s cash-in-lieu of car parking policy under Schedule E of the City of Hobart Planning Scheme 1982. Under Schedule E, new developments and changes where the use intensifies requires a payment to be made for Council provision of parking in cases where it cannot be provided on-site.

- **Objectives**

Report objectives were to:-

- generate an updated council car parking policy for the North Hobart commercial area, aimed at ensuring a reasonable level of parking access for users; and
- make recommendations for the provision, management and funding of car parking in the centre.

• **Conclusions and Recommendations**

The study recommended the following changes in regards to:-

- (a) Better pedestrian amenity;
- (b) Better management of existing parking; and
- (c) more parking.

**(a) Better pedestrian amenity**

- introduction of arrows on the lights at Federal Street/Elizabeth Street junction to encourage use of Federal Street rather than continuing down Elizabeth Street;
- a median strip along the centre of Elizabeth Street;
- Colouring of the road surface along Elizabeth Street to create a 'pedestrian friendly feel';
- colouring of pedestrian crossings at Federal and Burnett Street junctions with Elizabeth Street;
- 'bulbing' of side street junctions with Elizabeth Street;
- Narrowing of side streets to one lane at the entry to the residential sections of the street. Create speed humps at narrowed entries;
- An additional set of pedestrian lights across Elizabeth Street at Lefroy Street; and
- Widening of the footpath at the new pedestrian lights and the existing Pitt Street bus stop. Relocation of the bus stop nearer Burnett Street.

**(b) Better management of existing parking**

The report concluded that the most productive management option was to improve usage of the existing Lefroy Street car park. Redesign of the layout to increase spaces from 40 to 46. Improved lighting, directional signage and advertising would increase night-time use which is virtually non-existent, plus removal of the gate. Peak parking time is Friday evening with a nominal deficiency of 75 spaces yet Lefroy Street remains empty.

The second management option recommended was to negotiate with the owners of the State Cinema (AFI) to lease 16 spaces at the rear of the Cinema for day-time short term (max 2 hour) public use. The area requires sealing and signposting.

**(c) More parking**

Although not considered a priority objective, if intensification of usage was to continue, as had been the trend, then parking demand on the side streets would also intensify. To avoid the residential streets being overutilised by commercially derived parking, a further car parking area needed to be investigated as a medium to long term requirement.

The recommended option for additional parking was to acquire the rear of nos. 307 to 315 Elizabeth Street with access off Burnett Street via no. 55.

- **Outcomes**

The most obvious changes in North Hobart have resulted from the North Hobart Townscape Project with upgrading of the streetscape along Elizabeth Street such as footpath widening, street furniture and pavement artworks.

So far, few of the suggestions from the North Hobart Car Parking Investigation have been implemented although numerous spaces have been converted to short term (2 hour limit) in the Lefroy Street Car Park. Access to the car park via a right-of-way from Elizabeth Street however does not exist and the potential to provide parking within this block is still obvious. Several alterations have been made to the Lefroy Street Car Park in regards to permitted usage although it still lacks prominent signage from Elizabeth Street.

It is considered that the short term parking problem has eased somewhat and that pressure due to the Purity Supermarket and other shops may have eased as a result of the new Purity Supermarket at New Town and the relocation or closure of several North Hobart businesses.

### Sullivans Cove Traffic and Parking Management Study, 1994

- **Summary**

The study was commissioned by the Sullivans Cove Development Authority to 'provide for the present and future demands for car parking and the needs of people who access the Cove by either; private or commercial vehicles, on foot, by cycle, or by public transport'. The report was funded by the HCC, Marine Board of Hobart, DELM and Federal Better Cities Program and undertaken by an association of consultants.

- **Project objectives**

The project objectives were as follows:-

1. Identify the current and future traffic movement and car parking needs for Sullivans Cove, having regard to its changing land use pattern.
2. Provide options and recommendations for an operational strategy for the provisions of traffic movement, access and car parking appropriate to meet the needs of the economy and community of the Cove for the next ten years in an environmentally satisfactory manner.

3. Formulate proposals to ensure that essential services in and around the Cove are not unacceptably affected by the loss of car parking through redevelopment or recommended operational changes to parking.
4. Identify any sites in and around the Cove which should be utilised in whole or in part to meet future car parking needs.
5. Document the direct financial implications involved in the options for the provision of car parking identified - both capital and revenue.
6. Recommend cost appropriate options for traffic arrangements and associated preferred parking strategies, in a manner that will ensure the balancing of the needs of various traffic types, including pedestrians and cyclists as well as port and car traffic.
7. Recommend appropriate parking provisions for incorporation into the mooted Sullivans Cove Planning Scheme.

- **Recommendations**

- Change the long-term/short-term parking mix to favour short-term parking.
- Set pricing for short-term parking in conformity with the following principles:-
  - consider pricing of both on-street and off-street parking as a planning tool rather than a revenue generator;
  - maintain the Cove on-street and off-street parking space price structure at not less than parity with the CBD parking;
  - maintain the fine for illegal parking at a sufficient level to deter abuse of kerbside time limited parking spaces; and
  - introduce a system of courtesy warning for first time illegally parked and readily identified tourist vehicles.
- Numerous off-street parking options (immediate to long-term) at 16 locations ranging in size and cost.
- Consider several traffic management options.
- Develop a consolidated Planning Scheme, either for the Cove in its own right or as part of a revised Hobart City Council Planning Scheme.
- Adopt a new model Parking and Access Code for the Cove, as part of the proposed Planning Scheme.

- **Outcomes**

So far the most obvious developments affecting parking provisions have been the adoption of the 1997 Sullivans Cove Planning Scheme and the opening of the Salamanca Square off-street car park which is operated by Hobart City Council off Montpelier Retreat. The Hobart City Council is also now responsible for the policing of car parking in Sullivans Cove (formerly undertaken by the Marine Board of Hobart).

### Study of the Area North of the CBD, 1998

- **Summary**

The purpose of the report was to identify and explore the views of both residents and business operators in the area lying immediately to the North of the Hobart Central Business District with respect to the functionality of the area and the appropriateness of its current planning controls.

- **Project objectives**

#### **From the business operators**

- gather information about the type of business, its floor area, the number of people employed, the amount of off-street parking it provides;
- determine how long each business has operated in the area including how long it has operated at that site, the reasons for locating in the area and ascertaining salient attributes lying behind locational decisions, what they like and dislike about the area and the extent to which it has improved or degenerated since they moved into the area;
- identifying problems the operators have encountered as a result of the operations of others, other land uses in the area and the extent to which other land uses are creating problems;
- discovering whether the businesses would like to relocate and if so, where to; and
- determining whether the business has a trade waste facility such as a grease trap, whether it uses recycling or waste minimisation procedures and the forms of heating it uses.

#### **From the residents**

- determine when they moved into the area and their reasons for selecting the area (what they like and dislike about the area);
- identify problems they have encountered as a result of the operations of others, other land uses in the area and the extent to which other land uses are creating problems; and
- discover whether they would like to move and if so, where to.

- **Major findings**

The major relevant findings of the business survey were:-

- almost two thirds employed less than 5 people;

- more than 20 per cent of the sample occupied premises larger than 1000 sqm;
- main factors influencing choice of location were suitability, proximity to CBD, adequate off-street parking and visible location;
- the convenience and availability of parking facilities were important to 1 in every 5 organisations;
- parking problems including unlawful parking were identified as the main problem in the area, with many other problems most relating to the use or abuse of parking; and
- sixteen per cent of organisations have no off-street parking.

The main relevant findings from the resident survey were:-

- A high proportion of those interviewed are renting the property they are living in:-
  - 41 per cent are renting;
  - 25 per cent own their property; and
  - 10 per cent are in the process of buying their property.
- proximity to the CBD was given by the vast majority as the main reason for living in the area and as to why they liked living in the area;
- Noise from businesses and parking issues were identified as detractions to residential uses in the area;
- 80 per cent of the residents had off-street parking facilities with 21 per cent having more than 2 cars.

- **Recommendations**

Suggestions on how the council could improve the living area north of the CBD included beautifying the streets and improving parking facilities for residents.

Suggestions by business operators indicated that most general concerns relate to parking in the area and abuse of Council parking regulations.

### Calvary Hospital Master Plan Review - Parking Report, 1997

- **Summary**

Car parking was one of the major issues considered in the Calvary Hospital Master Plan MP2 (approval November 1992). The approved Master Plan proposed the provision of 225 on-site spaces at the end of Phase One of the implementation and ultimately 294. The assessment of need at that time was largely based upon a detailed traffic and parking study carried out by consulting engineers and planners, O'Connor Wargon Chapman, in March 1991.

Since then, some 13 parking reviews have been carried out and it has regularly been observed that as each new on-site parking area has been completed, although there is an immediate

improvement in the parking situation in the streets around the hospital, within 4-6 weeks, the situation returns to its previous state.

- **Outcomes**

As a result of the parking study's finding of increasing parking demand the Hospital has proposed to develop a staff car park off Raluana Lane to provide car parking for each member of staff. The approval of the proposed car park is however dependant upon the outcome of hearings before the Resource Management and Planning Commission into a revised Master Plan for the hospital.

### University Parking Study, 1990

- **Summary**

The report was prepared in response to a request from the HCC:-

*"in recognition of the University's incremental growth (with its consequential impact on local residential amenity in terms of car parking) it is desirable that the University undertake a comprehensive survey of its floor area (and related uses) staff/student parking and transport requirements and the current availability of parking spaces on the campus, such a study should be completed prior to any further major development submissions by the University to expand the campus"*

- **Recommendations and major findings**

The report concluded that:-

- there is a need for rationalisation of the University's on campus parking, traffic and related policies;
- there is sufficient space to provide additional parking for all future planned developments;
- the University performs well in relation to other educational, public and commercial facilities in the provision of parking;
- there will inevitably be some on street parking in areas close to the University;
- the University can provide on-site parking for all of it's staff, visitors, special needs and for public use of University facilities;
- the university cannot provide sufficient space on campus to provide for all student parking;
- there is some capacity to increase the level of student parking; and

- on street parking does not create a significant loss of amenity in adjoining residential areas because of it's limited extent, limited duration and restricted occurrence.

*Potential site developments for parking*

- old City Council Reserve area in the gully behind the Union Building and Alexander Street (100 spaces);
- area behind Hytten Hall (200 spaces);
- area off College Road behind the Medical Science building (60 spaces); and
- area adjacent to the Cottages behind 301 Sandy Bay Road (20 spaces).

- **Outcomes**

As a result of this report, several changes have been made as follows:-

- introduction of voucher parking system monitored by full-time parking attendant able to issue parking infringement notices (\$50);
- extension of parking area (extra 52 spaces) adjacent to sports centre and rugby field off Grace Street;
- an additional 38 spaces on Grosvenor Crescent in front of the Centenary Building (66 spaces at right angles adjacent to road, replacing existing 28 spaces); and
- additional car park (about 100 spaces) behind new Commerce and Economics building on upper campus site behind Hytten Hall.

Parking Requirements for Hotels 1995 (officer report)

- **Summary**

The study investigated the need for amendments to the City of Hobart Planning Scheme 1982, both by researching current provisions in other cities, and by undertaking a survey into the traffic generation of a number of Hobart hotels.

- **Major Findings**

The following options were suggested as a result of the study.

**Option 1 - No Change**

In light of the result of the local surveys undertaken, the evidence would not appear to be conclusive enough to reduce the minimum car parking standard, from the current scheme requirements.

**Option 2 - Reduce**



Follow trends in other cities, both interstate and overseas as well as locally, by reducing the requirement for hotel parking. Evidence from some of the hotels surveyed, such as the Wheatsheaf Hotel, would support this action.

### **Option 3 - Discretion to Vary**

Maintain the current parking standards, with discretion allowing Council to vary the number of spaces provided, based upon suitable evidence supplied by the applicant, as well as taking into account the impact on neighbouring properties if the carpark is filled to capacity.

- **Recommendation**

Option C was the recommended option, appropriate changes were incorporated into Table E1 of the Car Parking Schedule.

### **City of Hobart Planning Scheme 1982 Review - Hospital Parking, 1997**

(officer report)

- *Summary*

The report provided advice to Alderman on the existing parking provisions of the various hospitals in the City and suggested a future approach to parking associated with the hospitals.

- *Conclusions*

The current Planning Scheme provisions provide for different outcomes in relation to the requirements and provision of parking. RHH as a CBD located facility is not required to provide carparking on site. St. Helen's is in a Precinct where it is but is within a Heritage Area. St. John's and Calvary are both located in suburban locations, in otherwise predominantly residential locations.

The performance of hospitals varies against the requirements of the Scheme. All hospitals are addressing the parking issue in various ways as part of their future planning.

The current process of requiring St John's and Calvary Hospital to address car parking in detail as part of their submissions on Planning Scheme amendments is considered more appropriate in terms of potential "accuracy". It also recognises community demands for involvement and transparency of process that relates to the local situation, rather than "imported" provisions.

The use of Local Area plans supplemented by Part 5 Agreements to facilitate off site works (and possibly contributions) are the technical and legal means for this approach.

Council should take an active role in matters related to the off-site management of traffic and parking generated by hospitals.

- Recommendations

Council agreed that, in reviewing or amending the planning scheme, it would use Local Area Plans (or Master Plans) supplemented by Part 5 Agreements to facilitate off site works (and possibly contributions) as the technical and legal means for the adoption and implementation of traffic and parking provisions for hospitals where appropriate.

Council recognised the need for it to take an active role in addressing and resolving off street and parking issues related to hospital generated traffic.

### 3.1.2 Summary of Conclusions from Previous Studies

The pertinent issues which have been ascertained from the previous studies are summarised in the following table.

Study	Issues
Study of Area Nth of CBD	<ul style="list-style-type: none"> <li>• improve living area</li> <li>• parking facilities for residents</li> <li>• availability of business parking</li> <li>• abuse of parking regulations</li> </ul>
Calvary Hospital Master Plan Review	<ul style="list-style-type: none"> <li>• main parking demand is staff</li> <li>• more spaces for courier &amp; patient set down &amp; pick up</li> <li>• better management of consultant spaces</li> </ul>
Review of car parking provisions for Hotels	<ul style="list-style-type: none"> <li>• results of study inconclusive</li> <li>• it is apparent that variations in parking profile makes the application of uniform standards difficult</li> <li>• variations in standards recommended upon justification</li> </ul>
Hobart CBD Parking and Access Study	<ul style="list-style-type: none"> <li>• latent demand for car spaces</li> <li>• step increment in car park charges</li> <li>• higher parking meter charges</li> </ul>
Sullivans Cove Traffic & Parking Management Study	<ul style="list-style-type: none"> <li>• change short /long term parking mix</li> <li>• new model; access and parking code</li> </ul>
North Hobart Car Parking Investigation	<ul style="list-style-type: none"> <li>• pedestrian amenity</li> <li>• management of parking supply</li> <li>• more parking</li> </ul>
Sandy Bay Car Parking Investigation	<ul style="list-style-type: none"> <li>• pedestrian amenity</li> <li>• management of parking supply</li> <li>• more parking</li> </ul>
CASP	<ul style="list-style-type: none"> <li>• maintenance of adequate parking supply and accessibility</li> <li>• increased supply of short term parking and reduction in long term parking supply</li> <li>• regular reviews of parking supply/ demand ratio adequacy</li> <li>• shift in CBD from on street to off street parking supply</li> </ul>
University Car Parking Study	<ul style="list-style-type: none"> <li>• additional parking for future developments</li> <li>• on - street parking does not reduce residential amenity</li> </ul>
Frame District Parking Study	<ul style="list-style-type: none"> <li>• commuter parking</li> <li>• resident parking</li> <li>• inflexible parking standards</li> <li>• cash in lieu</li> <li>• weaknesses of the Planning Scheme Schedule "E"</li> </ul>
Hospital Parking Review	<ul style="list-style-type: none"> <li>• management of parking supply on and off site</li> <li>• use of Local Area Plans</li> </ul>
Multi-Unit Parking Review	<ul style="list-style-type: none"> <li>• parking standards adequate</li> </ul>

The main issue that arises out of the research of past studies is the need to further evaluate:-

- parking time share;
- parking credits;

- parking areas;
- cash in lieu; and
- parking supply management.

### 3.2 Description of Existing Scheme Provisions and Associated Issues

#### 3.2.1 Description of Scheme Provisions & Issues

The existing provisions of the City of Hobart Planning Scheme relating to traffic and parking are principally contained within Development Control Principles 14 and 15 and Schedule E - 'Traffic, Access and Parking Schedule'.

The following table presents a brief summary of the content of the various provisions and identifies the issues relevant to their application.

<u>Summary of Scheme Provision</u>	<u>Issues</u>
<b>Principles</b>	
<b>Principle 14</b>	
<ul style="list-style-type: none"> <li>• development only permitted if it facilitates mutual compatibility of public and private transport</li> <li>• applications must demonstrate that they will not create traffic that is detrimental to safety or amenity</li> <li>• adequate provisions must be provided for access, parking in accordance with Corporations requirements</li> </ul>	<ul style="list-style-type: none"> <li>• lack of comprehensive strategic basis for determining principles</li> <li>• open to interpretation, invites possible exercise of discretion even for minor variations</li> <li>• requirements may be unnecessarily onerous especially for smaller scale developments</li> <li>• are not generally applied - open to interpretation as to application</li> </ul>
<b>Principle 15</b>	
<ul style="list-style-type: none"> <li>• security may be required to ensure car park areas constructed in accordance with approved plans</li> </ul>	<ul style="list-style-type: none"> <li>• may be an unnecessary duplication</li> <li>• may require exercise of discretion</li> <li>• can deter development</li> <li>• are there other means of insuring compliance ?</li> </ul>
<b>Schedule E Traffic, Access and Parking</b>	
<b>E 1 Introduction</b>	
<ul style="list-style-type: none"> <li>• refers to Principles 14 &amp; 15 and the Scheme Intent</li> </ul>	
<b>E 2 Traffic Generation</b>	
<ul style="list-style-type: none"> <li>• where an increase in traffic volume occurs, provisions will be required to accommodate this volume to the satisfaction of the Corporation</li> <li>• adequate sight distance for access points will be required</li> <li>• certain measures may be required to accommodate additional vehicles</li> <li>• access and parking provisions to be constructed to the Corporations current</li> </ul>	<ul style="list-style-type: none"> <li>• does not identify how resulting traffic volumes are to be determined</li> <li>• does not specify the scope of measures that may be required at developers expense</li> <li>• does not specify the applicable standards for sight distance, access and parking provisions</li> </ul>

Summary of Scheme Provision	Issues
Standards	
<p><b>E 3 Access Requirements</b></p> <ul style="list-style-type: none"> <li>specifies minimum access widths</li> <li>allows variations on minimum access widths</li> <li>vehicles must enter and leave in a forwards direction unless varied</li> </ul>	<ul style="list-style-type: none"> <li>access and parking provisions can visually dominate</li> <li>are the required access widths justified ?</li> <li>should they be linked to the number of spaces or the type of use ?</li> <li>no concise guidelines for allowing variations</li> <li>do not encourage semi - permeable surfacing to minimise run off, or streetscape responsive design solutions</li> </ul>
<p><b>E 4. Parking Standards</b></p> <ul style="list-style-type: none"> <li>Table E1 identifies minimum number of spaces required for each Use Group</li> <li>spaces and accessways to comply with Aust. Standard, unless varied by Council</li> <li>for changes to existing developments - the additional requirements relate to the differences between the existing and proposed use</li> <li>parking requirements for multiple uses are the sum of the totals for the individual uses</li> </ul>	<ul style="list-style-type: none"> <li>Table E1 lacks any strategic context , the standards are not supported by contemporary empirical data, are they justified ?</li> <li>standards do not address off-site influences such as precinct demand and supply assessments</li> <li>there is no provision for space sharing between developments</li> <li>use groups in E1 are not comprehensive, there are many defined uses not listed</li> <li>do not encourage semi - permeable surfacing or streetscape responsive design solutions</li> <li>there are no guidelines for exercises of discretion</li> <li>the application of the Aust. Standards may invoke an exercise of discretion</li> <li>not inclusive i.e. vis. accom. requirements in Sched. A &amp; dwells. Sched. K</li> </ul>
<p><b>E 5 Visitor Parking</b></p> <ul style="list-style-type: none"> <li>visitor parking required for Use Groups 1,2,3 at the rate of 1 per 160 m2 of floor area</li> <li>for Use Group 1 " jockey parking " will be acceptable</li> </ul>	<ul style="list-style-type: none"> <li>standards are not supported by contemporary empirical data</li> <li>" jockey parking " not defined</li> <li>no specific provision for variation of these provisions, this is inconsistent with E.1 and other provisions of the Schedule</li> </ul>
<p><b>E 6 Nature of Parking</b></p> <ul style="list-style-type: none"> <li>contains principles for the determination of parking space provisions</li> <li>spaces may be reserved for specific classes of persons</li> <li>the location of spaces to be appropriate to the prevailing character and the D.F.C. For the Precinct, spaces in front of the building line are generally restricted but may be varied</li> </ul>	<ul style="list-style-type: none"> <li>these principals have general application and may be more appropriate as an introduction to the Schedule</li> <li>should identify Aust. Standards requirements for equal access</li> <li>siting requirements are vague and open to interpretation</li> <li>could be in conflict with previously identified standards, if difference between the provisions which prevails ?</li> </ul>
<p><b>E 7 Exceptions &amp; Variations for Parking</b></p> <ul style="list-style-type: none"> <li>no spaces required in the Central Retail Zone and Precincts 2,3 &amp; 4 of Central Commercial &amp;</li> </ul>	<ul style="list-style-type: none"> <li>more appropriate as an introduction to the Schedule</li> </ul>

Summary of Scheme Provision	Issues
<p>Administration Zone</p> <ul style="list-style-type: none"> <li>the number of spaces may be varied in a residential, rural, recreational and Hills Face Zone if - residential amenity or safety impacted; - the development can be serviced by on street or existing off street facilities without detrimental impacts</li> <li>variations in the number of spaces may be applied on heritage grounds</li> </ul>	<ul style="list-style-type: none"> <li>should be part of a comprehensive list of variations with guidelines for their application</li> <li>there is duplication with variations in other provisions</li> <li>does not apply to access and manoeuvring areas</li> </ul>
<p><b>E 8 Cash-in-lieu</b></p> <ul style="list-style-type: none"> <li>cash may be accepted in lieu of required spaces for Use Groups 1V - XV1</li> <li>zones or precincts are defined where cash in lieu may be accepted - Appendix 1</li> <li>the number of spaces required under Table E 1 shall be used as a basis for calculating the amount of cash in lieu</li> <li>note refers to up to date requirements</li> </ul>	<ul style="list-style-type: none"> <li>the actual amount of cash per space is arbitrary - the formula for calculation is not defined</li> <li>lump sum amounts for cash in lieu can deter development</li> <li>alternative means for staging payments have merit</li> <li>Council has not identified sites for the expenditure of cash in lieu sums</li> <li>money held by Council does not address the demand of developments</li> <li>does not allow for alternatives such as shared or tied parking provisions</li> <li>implies statutory requirements are not up to date and relies upon other non statutory provisions</li> </ul>
<p><b>E 9 Traffic, Access &amp; Parking Policies for Each Zone</b></p> <ul style="list-style-type: none"> <li>establishes policy objectives for each of 21 zones</li> </ul>	<ul style="list-style-type: none"> <li>the principle has merit but wording too general to be useful consequentially these policies have limited relevance for development control</li> <li>these should be part of a general strategic contextual statement at the beginning of the Schedule</li> <li>not particularly relevant to on-site parking and access</li> <li>does not deal with general policy issues of transport planning and parking supply for the city</li> <li>are not comprehensive ie. no statement for Special Use Zone 7</li> </ul>
<p><b>E 10 Significant Development</b></p> <ul style="list-style-type: none"> <li>developments which are significant traffic generators or development which concentrates traffic or requires new traffic routes shall be referred to the Department of Roads and Transport</li> <li>where development abuts a Highway the Department's views shall be considered</li> </ul>	<ul style="list-style-type: none"> <li>who determines if development will be a significant traffic generator</li> <li>the Dept. of Roads and Transport is now part of Dept. of Infrastructure Energy &amp; Resources</li> <li>duplication with Section 60 referrals</li> </ul>

---

### 3.2.2 Summary of Conclusions from the review of the existing Planning Scheme Provisions

The following are the principal issues relating to the application of the Scheme provisions relating to parking and access and Schedule E:-

- there is a lack of comprehensive strategic basis for determining principles relating to parking and access;
- current provisions do not identify how resulting traffic and parking volumes have been determined;
- there are no concise guidelines to consider variations to usual on-site standards;
- Table E1 lacks any strategic context, the standards are not supported by contemporary empirical data;
- there is no provision for space sharing between developments;
- use groups in Table E1 are not comprehensive - many types of use are not specifically treated; and
- alternatives to cash-in-lieu policy should be considered.

### **3.3 Examples of Policies and Standards Applied Elsewhere**

#### **3.3.1. Introduction**

Traffic and parking generation data and policies have been extracted from a review of a group of Planning Schemes chosen on a national basis from those Cities which were considered to be most relevant to the population size and infrastructure scale of the City of Hobart.

The research has identified examples which may be categorised as either:-

- parking policy;
  - the various parking policies drawn from a sample of Council's throughout Australia. Included are conclusions regarding a suitable policy framework drawn from the research.
  
- on-site parking standards;
  - a matrix has been constructed which identifies the various on-site standards from a range of Councils (refer Appendix 1).

#### **3.3.2. Comparison of Planning Scheme Parking Policies**

The following dot point summary provides a comparison of alternative policies and is a useful indicator as to the appropriateness of the Hobart City Council's existing policy.

- City of Adelaide

Council's parking policy is under pinned by the objective to keep vehicular movements in the Central Business Area to a minimum. No parking contribution scheme exists for the CBA and provision of on-site car parking has been prohibited for over ten years.

Council together with private enterprise has generated an over supply of parking space. Developers are required to provide one space per 100 square metres of commercial space but these spaces are not to be provided on-site. Where a shortfall in parking occurs for a new development, a long term lease is arranged to cover the shortfall in the nearest public car park which has an available parking supply surplus.

In the business and commercial zones outside of the CBA core a requirement to provide one car park space per 100 square metres of commercial space exists but this is frequently waived if parking is not available.



- Albert Shire (Queensland)

On-site parking is required to be provided however if the spaces cannot be provided then cash in lieu payments of between \$9,000 and \$12,000 per space are charged and the collected moneys are used to provide parking on earlier purchased (relatively cheap) land acquisitions.

No term payments are permitted and the total payment must be made when the planning permit is issued.

- City of Burnie

Car parking and Access provisions are contained in Part 8 of the Burnie Planning Scheme 1989.

No on-site parking is required within the CBA for developments except for hotels and motels. A parking rate is charged and Council provides all parking within the CBA. The fundamental principal of the parking rate is to enable the establishment of a cohesive, holistically managed and strategically located parking supply within the CBA. Sufficient funds have been accumulated under this scheme to support the recent construction of a significant multi-decked car park on the corner of Marine Terrace and Wilmot Street.

Despite Council's general policy of not requiring on-site parking, recently a MacDonalds restaurant, Harvey Norman (ex Loughrans) store and a supermarket have all provided on-site parking to meet their commercial priorities. These exceptions have raised the question as to the equity of the parking rate. A proposal to discount the rate in these circumstances is being considered by Council.

- City of Brisbane

The Brisbane City Council no longer operates a cash in lieu policy. The underpinning policy is to promote public transport. Privately operated car parking stations are provided within a 2 km radius of the CBA and the use of these is encouraged rather than taking cars in to the CBA.

In areas outside of the CBA development applications are judged on their individual merits and if they cannot provide the number of parking spaces as specified under the Scheme, the application is either refused or the parking space requirement is waived.

- City of Darwin

On-site parking may be provided and if not, cash in lieu is an option with the payment required before approval.

The Council is currently considering a time payment option secured by a bank guarantee . The time payment period would depend on the amount due with a maximum repayment period of four years. A minimum of 25% will be required up front with quarterly repayments and interest charged at 1% higher than the overdraft rate at the time payment falls due.

- City of Campbelltown (New South Wales)

Cash in lieu policy exists for both the CBA and other areas with the charge per space being set at \$11,00 for the CBA and \$5,00 in other areas.

Term payment for cash in lieu is not normally accepted and bank guarantee is required at the time of development consent or building approval. The guarantee is for twelve months after occupation and payment is on the basis of 25% down with 3 payments of 25% staged over the remainder of the year at an interest rate set at 1.5% above the ruling rate at the time of each instalment.

- City of Clarence

The Council has cash in lieu requirement of \$1,200 or such amount as determined by Council. The policy requires that contributions must be spent on the provision of parking and only applies in areas where public car parking has been established.

Developers should where possible provide at least half of parking on their land and where possible this parking should be integrated into Council's public parking areas.

- City of Glenorchy

The City of Glenorchy has a policy of "free parking" and this is perceived as giving the City a commercial competitive edge over the City of Hobart.

Parking strategies are being developed for each of the three commercial precincts within the City; Glenorchy, Moonah and Claremont.

The Glenorchy commercial precinct strategy has recently been formulated, in part as a response to the need to consider the parking time share impacts of constructing a Cinema complex on the vacant land surrounding the Glenorchy Central Shopping Complex. The strategy which has evolved uses the following concepts: maintaining a surplus of parking supply; Council management of all parking supply; and a performance based (parking demand to supply assessment) decision making process. The development of this parking

strategy has been based on Council's past experience and the mainland experience of Council's contracted traffic engineer's parent organisation, Andrew O'Brien and Associates. Whilst the background and theory behind the development of the strategy is sound it will be some time before a meaningful evaluation of its efficacy can be made.

Cash in lieu is taken when developers cannot provide on-site parking and the issues of equity, appropriateness of charge and distribution of accumulated moneys are typical of the concerns with this process. Council has also leased public car park spaces to developers to meet their shortfall in parking.

- City of Melbourne

Cash in lieu contributions do not apply to the CBA area but apply in some areas such as Carlton. The average charge is around \$30,000 per space and an applicant whose development is deficient in car parking space must apply to the council for permission to pay cash in lieu.

The Council has the discretion to decide how cash in lieu should be paid and may allow payment by instalments. These are seen as a charge on land and are collected under the authority of the Local Government Act.

Council has had problems with collecting outstanding payments for cash in lieu and has adopted a policy of full payment upon approval. A recent move to collect outstanding amounts, which was supported by the incentive of a substantial increase in charges, resulted in a return of \$1M in six months. Council has funded the construction of an 150 space car park out of cash in lieu funds which had accumulated over a 10 year period.

Appeal decisions have forced Council to only charge cash in lieu where spaces exist and if none exists the parking requirement is either waived or the application rejected.

- City of Norwood (South Australia)

Norwood is a suburban South Australian Council with an older "strip" commercial shopping area. On-site parking is not required and a cash in lieu policy applies in the core area with the cost per space is in the order of \$12,500.

A condition is normally put on the approval permit requiring a bank draft for the full amount prior to completion of the development. However a time payment scheme of 50% initially and the remaining amount paid six months after completion has also been permitted.

- City of Perth

Council has adopted a policy for the Central Area which specifies amongst other things the rate of car parking spaces per hectare.

“Use of Public Car Park Policy” - allows the use of public car park spaces for developments if Council is satisfied that these facilities are sufficient to cater for the developments requirement and the applicant enters into an agreement with Council to pay part or all of the cost of providing the public car parking spaces.

“Shared or Combined Spaces” - where the number of car parking spaces proposed to be provided is less than the Scheme requires Council may approve the development if the applicant demonstrates that there are off street parking facilities nearby which are available and arrangements have been made to enable the use of the facilities to service the short fall in parking spaces.

### 3.3.3 Comparison of Parking Provision Short Fall Policy Options

The following summarises four options drawn from the policy examples for handling the issue of development parking shortfalls where it has been determined that the proposal does not warrant outright rejection.

- Parking Rate

It is necessary to specify:- the area to which the rate is to apply, the purposes for which the rate is levied and benefits to the area subject to the rate. The length of time the rate will apply is determined and the amount of rate is normally assessed on the annual average valuation. The advantages and disadvantages of this concept are summarised in the following table.

Advantages	Disadvantages
Provides direct benefit to properties within the defined area	Is a facilities fee and does not recover full cost
Relatively simple to administer	Perceived to disadvantage those properties with parking ( unless discounted )
Enables a cohesive management of parking supply and access	Requires a commitment to the supply of public parking
Is equitable - particularly if the rate is discounted for those with parking	Depends on the availability of public parking space and land

## Advantages and Disadvantages of Parking Rate

- **Cash in Lieu**

The cash in lieu system involves the payment for short fall in the number of parking spaces required on-site for the proposed land use. Ideally the payment should be based on the real cost of providing the spaces. The advantages and disadvantages of this concept are summarised in the following table.

Advantages	Disadvantages
Caters for the cost of parking generated by each development - user pays.	Cost per space can be perceived as excessive.
Provides a 'bank' to service future public parking provisions.	Targets only new developments and can be perceived as discriminatory.
Can address existing parking shortfalls	Funds may need to accumulate to be over time sufficient to provide parking
	Difficult to achieve new off-street spaces in established areas
	Inequitable if the public car parking supply cannot be provided now or future parking sites not identified.

## Advantages and Disadvantages of Cash in Lieu

- **Rental or Lease Charges**

This system requires the applicant to sign a rental or lease agreement for the deficit in spaces to be met from the public supply of spaces. The charge can be for a fixed contracted term or on scheduled quarterly annual payments and would apply for the life of the development.

The advantages and disadvantages of this concept are summarised in the following table.

Advantages	Disadvantages
Particularly useful when there is a temporal difference in parking demands - ie. shared parking	Is development specific and may create problems if the nature of the development changes in the future
Avoids the need for high up front costs and fee can be adjusted to suit changing conditions	Targets new and major re-developments only

Treats the area's parking supply (on street and off street) in an holistic manner	Requires sufficient public parking supply to be available now to service the existing demand, new demand and surplus for the future
Provides a regular parking revenue source for maintenance and up grading and future increase in supply	System requires regular monitoring and administration and could overload existing human resources
Facilitates effective management of parking and traffic flows.	Requires a commitment of resources for area parking strategic planning and management

### Advantages and Disadvantages of Rental or Lease Charges

- **Performance Assessment**

This system requires the developer to demonstrate, to the satisfaction of Council, that the proposal will generate less than the statutory parking demand. For example one approach to this could be to demonstrate that the hourly distribution of the development's parking demand is different than the area's parking demand and therefore any deficit in the developments parking can be picked up by the available and, at present, under utilised parking supply.

In order to work effectively, a performance assessment system requires a professional staff which are committed to the concept of the holistic management of parking as a "planning tool", a Council endorsed comprehensive strategic parking management plan for the area, surplus of public parking spaces (either in numbers or by time of day), time restricted parking and a commitment to an active policing of the public spaces. In some instances, a partnering (ie. a formal agreement for Council to manage privately owned parking supply in partnership with the owner) for the management and enforcement of large private parking lots' parking spaces may be required to prevent customer and employees parking in adjacent controlled private Public spaces.

The advantages and disadvantages of this concept are summarised in the following table.

Advantages	Disadvantages
Enables a cost effective balancing of area parking demand / supply.	Difficult to enforce once the development has been completed
May utilise vacant car parking spaces for the greater public good.	Requires effort to manage changes in land use .
Insures that the demand and supply for parking is balanced	May require private sector rental/lease agreements.

Enables non-performing proposals to be refused/rejected	Could require rental or leasing charges plus administration costs.
---	--

## Advantages and Disadvantages of Performance Assessment

### 3.3.4 Conclusions - Parking Policy

There are a range of policies available for the effective management of a development's or group of developments' parking demand/supply in a cost effective manner and in the best interests of all stake holders and, most importantly, for the greater public good.

Councils have generally adopted differing policies which reflect their individual objectives in respect to land use and transport planning.

It is considered that the best approach is to treat parking as a planning tool and to take an area by area approach to the strategic planning and management of the parking demand supply equation. In this context any or a combination of the four methods of compensating for the short fall in the parking supply/demand equation may be appropriate.

The proposed approach will generally entail a surplus in public car park spaces, setting up and maintenance of an effective car parking demand system, accepting that the on street and off street parking supply should be managed as one entity and the entering into parking management partnerships with the private car park owners. A policy framework which provides for a decision making process along the lines proposed in the decision flow chart "Guidelines for the Management of Parking Demand/Supply" as shown in Section 5.4 of this report.

On the surface the proposed approach may appear to be difficult to implement. However, it should be noted that the amount of work required to solve each case will depend on its magnitude and complexity. For example, simple forms of partnering would include: the committing of on street kerbside space to a time restriction to suit a high turnover business operation and; the installation and enforcement of time restrictions in private car parks. An example of a more complex case would be the Federation Concert hall where the State Government and the Council have committed to assist with the provision of off site parking. This latter approach to parking supply is becoming more prevalent in areas such as Sullivan Cove (Elizabeth Street Pier Development) and the Hobart CBD (Hobart Private and Royal Hobart

Hospital) where the cost of land and the provision of single development linked parking spaces is prohibitive.

The selection of parking areas will be problem specific and could be as broad as suburbs. In most cases, however, they will be kept to a manageable size. To assist in the selection of the areas the following questions have been provided:-

- Is there a likelihood of parking supply share by, for example, a migration of time controlled potential customers to uncontrolled spaces?
- Is there a high demand for long term parking spaces (employees) and will this demand impact on customer parking?
- Is the area serviced by an adequate public transport system?
- Are there adequate and safe pedestrian linkages and is the area within an attractive (say 300 metre) walking distance?
- Can surplus parking be generated?
- Can agreements be reached for partnering the management of the parking supply?
- Is there a high demand for on - street parking?
- Has Council the resources to manage the parking/supply and, if so, in what detail?
- Is the area within a Council recognised enforcement area and, if not, what additional resources are required.
- Will the management of the area's parking/supply be cost effective and, if not, should the area be reduced in size or the extent of the management scaled down?
- Is the area or part of it suitable for time share parking and, if so, can a partnering be facilitated to achieve this shared parking?

### 3.3.5 Comparison of Planning Scheme - On-Site Parking Standards

On-site parking standards for a range of uses from a sample of planning schemes have been consolidated in the matrix contained in Appendix 1. It can be seen from this matrix that, direct comparisons are difficult to draw given the differing use classifications of the various Councils. Some of these standards are also somewhat dated and lack any statistical basis.

The Tasmanian Model Planning Scheme (Draft September 1998) contains a Parking and Access Schedule which is attached as Appendix 2. The standards contained in this Schedule were derived from a review of existing Tasmanian planning schemes and not from original research of development parking and access requirements. As such, they lack a statistical basis and are applied in a very general sense to broadly defined use groups. It is not considered that the standards would be relevant to a broad range of developments which have distinct parking



and traffic generating profiles. Nevertheless, the performance based format is a useful structure on which to develop a more comprehensive set of provisions for Hobart.

Other sources were also investigated and from this research of national reference material it was evident that the Road Traffic Authority document "Traffic Generation Characteristics of Developments" contained the most recently and comprehensive traffic and parking data. A comparison of the RTA data with the Schedule E of the Hobart Planning Scheme is included to identify differences between it and Hobart's current practice and to identify particular use classes which require further investigation.

The following note from the RTA Guide identifies the basis for the proposed standards:-

*The recommended numbers of car parking spaces to be provided for each land use type are generally based on surveys and research conducted by the RTA. These recommended levels represent parking requirements needed to meet the peak parking accumulations observed. In the RTA's research, trial surveys established the peak hours and days of the week without consideration of seasonal variations. The recommended parking levels are based on these surveys. Where a proposed development is expected to have strong seasonal variations, an assessment of the impact of these variations is desirable. Consideration of factors such as mode split and car occupancy is also desirable.*

*The RTA's land use/traffic generation research has concentrated on establishing empirical relationships in order to explain characteristics of traffic generation and parking. The empirical relationships involved illustrate the existing operation of the developments surveyed. However, the independent variables used in these relationships are not always suitable for predicting future traffic generating characteristics of a proposed development. For example, while the number of employees at a development can often be used to provide a good explanation of traffic and parking behaviour, this number is not always accurately known at the time that a development application is lodged. Also, specific uses of the development might change with time. In the case of factories, traffic and parking behaviour can vary substantially between different types of factories although they may be of the same size. Change in the use of developments does not always require planning consent.*

*The parking provisions recommended in this section are based, wherever possible, on physical characteristics of the proposed development, particularly the gross floor area.*

Schedule E	RTA Guide
<b>Residential</b>	
<b>house / flat</b> - space /dwell <ul style="list-style-type: none"> <li>• small (=&lt;, 75 m2 )- 1.</li> <li>• medium (75 m2 to 110 m2 )- 1.25.</li> <li>• large (=&gt; 110 m2 )- 1.5.</li> <li>• visitor parking ( 4 + dwells /lot ) - 0.25/ dwell.</li> </ul>	<b>dwelt houses</b> 1-2 space per dwelt.
<b>ancillary flat</b> 1 additional space	<b>dual occupancy</b> 2 space per site
<b>home occupation</b> no add. requirement	<i>not addressed</i>
	<b>medium den. Flat</b> (less than 20 units ) - <ul style="list-style-type: none"> <li>• 1 space per unit +</li> </ul>

Schedule E	RTA Guide
<p><b>multiple dwells.</b> 2 spaces per 3 bedrooms</p>	<ul style="list-style-type: none"> <li>• 1 space per 5 x 2 bed units +</li> <li>• 1 space per 2 x3 bed units +</li> <li>• vis. parking @1 space per 5 units</li> </ul> <p><b>high den. Flat</b> ( greater than 20 units )</p> <ul style="list-style-type: none"> <li>• 0.6 per 1 bed unit or</li> <li>• 0.9 spaces per 2 bed unit</li> <li>• 1.4 spaces per 3 bed unit</li> </ul>
<p><b>E.P.U.</b> 1 space per unit</p>	<p><b>housing for aged or disabled</b> self contained units</p> <ul style="list-style-type: none"> <li>• 2 spaces per 3 residents +</li> <li>• 1 space per 5 units ( visitors )</li> </ul> <p><b>hotels, nursing &amp; convalescent homes</b></p> <ul style="list-style-type: none"> <li>• 1 space per 10 beds (visitors ) +</li> <li>• 1 space per 2 employees +</li> <li>• 1 space per ambulance</li> </ul>
<p><b>domestic business</b> 1 space per vehicle used in assoc. with domestic business</p>	<p><i>not addressed</i></p>
<b>Health and Community Services</b>	
<p><b>consulting rooms</b> 1 space per 30 m2 f.a.</p>	<p><b>profess. consulting rooms</b> 3 spaces per surgery or based on comparisons with similar</p> <hr/> <p><b>extended hours medical centres</b> 4 per 100 m2 g.f.a.</p>
<p><b>community centre</b> 1 space per 13 m2 f.a.</p>	<p><b>child care centre</b> 1 space for ea. 4 children</p>
<p><b>place of public worship</b> 1 space per 10 seats</p>	<p><i>not addressed</i></p>
<p><b>hospital</b></p> <ul style="list-style-type: none"> <li>• 1 space per 2 beds</li> <li>• + 1 space per 2 employees</li> <li>• + 1 space per doctor</li> </ul>	<p><i>not addressed</i></p>
<p><b>hospital out-patient facil.</b> as determined</p>	<p><i>not addressed</i></p>
<p><b>welfare institution</b> 1 space per 200m2 f.a.</p>	<p><i>not addressed</i></p>
<b>Education &amp; cultural institutions</b>	
<p><b>prim. &amp; second. schools</b></p> <ul style="list-style-type: none"> <li>• 1 space per 2 staff</li> <li>• + 4 spaces for visitors</li> <li>• + 1 bus space</li> </ul>	<p><i>not addressed</i></p>
<p><b>matric. College</b></p> <ul style="list-style-type: none"> <li>• 1 space per 2 staff members</li> <li>• + 1 space per 20 students</li> </ul> <p><b>university etc.</b></p> <ul style="list-style-type: none"> <li>• 1 space per 2 staff</li> <li>• + 1 space per 10 students</li> </ul> <p><b>galleries, museums or libraries</b></p> <ul style="list-style-type: none"> <li>• 1 space per 80m2 f.a.</li> </ul>	<p><i>not addressed</i></p>
<b>Office &amp; Commercial</b>	
<p><b>office</b> 1 space per 80 m2 f.a.</p>	<p><b>office or commercial premises</b> 1 space per 40 m2</p>
<p><b>shop, local shop bank</b></p>	<p><b>shopping centres</b></p>

Schedule E	RTA Guide
1 space per 45m <sup>2</sup>	GLFA. (m <sup>2</sup> ) spaces per 100m <sup>2</sup> GLFA 0-10K 6.1 10K- 20K 5.6 20K-30K 4.3 over 30K 4.1
<b>take away food shop, supermarket</b> 1 space per 15 m <sup>2</sup> f.a.	<b>service stations &amp; convenience stores</b> <ul style="list-style-type: none"> <li>6 spaces per work bay</li> <li>+ 5 spaces per 100m<sup>2</sup> GFA of conven. store (if restaurant also, then greater of: 15 spaces per 100m<sup>2</sup> GFA, or 1 space per 3 seats )o</li> </ul>
	<b>motor showrooms</b> <ul style="list-style-type: none"> <li>0.75 spaces per 100 m<sup>2</sup> site area</li> <li>+ 6 spaces per work bay ( if applicable )</li> </ul>
	<b>Car tyre retail outlets ( which ever is the greater of )</b> <ul style="list-style-type: none"> <li>3 spaces per 100 m<sup>2</sup> GFA, or</li> <li>3 spaces per work bay</li> </ul>
	<b>Markets</b> 2.5 spaces per stall
	<b>Bulky goods retail stores</b> compare other devels.
	<b>Video stores</b> 6.1 spaces per 100 m <sup>2</sup> GFAV
	<b>Take away food outlets</b> ( no on-site seating ) <ul style="list-style-type: none"> <li>12 spaces per 100 m<sup>2</sup> GFA</li> </ul> ( on- site seating ) <ul style="list-style-type: none"> <li>12 spaces per 100 m<sup>2</sup> GFA + greater of 1 space per 5 seats ( internal &amp; external ), or 1 space per 2 seats ( internal )</li> </ul> ( on- site seating & drive through facilities ) <ul style="list-style-type: none"> <li>1 space per 2 seats ( internal ), or</li> <li>1 space per 3 seats ( internal and external)</li> <li>+ queuing area for 5 to 12 cars</li> </ul> <p>specific provs.( + normal requirements ) for -                      Macdonald's are 10 car lengths in drive through capacity however queue must be able to extend to 12 cars without disruption                      Kentucky are 6 car lengths in drive through capacity however queue must be able to extend to 8 cars without disruption</p>
<b>Service Industry</b>	
<b>holiday unit, motel</b> <ul style="list-style-type: none"> <li>1 space per unit</li> <li>+ 1 space per 2 employees</li> </ul>	<b>motel</b> <ul style="list-style-type: none"> <li>1 space for each motel unit</li> <li>+ 1 space per 2 employees ( where function rooms &amp;/or restaurant included )</li> <li>15 spaces per 100 m<sup>2</sup> gross floor area of restaurant/ function room, or</li> <li>1 space per 3 seats, whichever is greater</li> </ul>
<b>bed &amp; breakfast accom (Schedule A )</b> <ul style="list-style-type: none"> <li>1 space for the owner</li> <li>+ 1 space per 2 beds</li> </ul>	<i>not addressed</i>
<b>hotel</b> <ul style="list-style-type: none"> <li>2 spaces per 3 bedrooms</li> <li>+ 1 space per 2 m<sup>2</sup> bar floor area</li> <li>+ 1 space per 2 employees</li> </ul>	<b>hotels ( traditional )</b> <i>surveys show no relationships between parking demand and floor area or function room capacity- comparisons should be drawn</i>

Schedule E	RTA Guide
	<b>hotels ( tourist )</b> <ul style="list-style-type: none"> <li>• 1 space per 5 bedrooms ( 5 star international )</li> <li>• 1 space per 4 bedrooms ( 3 &amp; 4 star )</li> <li>• + 2 coach lay- by spaces</li> <li>• + 1 taxi lay by space per 100 rooms</li> </ul>
<b>club, cinema, theatre, or restaurant</b> 1 space per 5 seats	<b>restaurants</b> <ul style="list-style-type: none"> <li>• 15 spaces per 100 m2 GFA, or</li> <li>• 1 space per 3 seats</li> </ul>
	<b>clubs</b> -comparisons should be drawn with similar
<b>Recreation and tourist facilities</b>	
<b>active recreation</b> ( as determined )	<i>not addressed</i>
<b>amusement machine centre, health studio (gym)</b> 1 space per 45 m2 floor area	<b>gymnasiums</b> 3 spaces per 100 m2 GFA
	<b>caravan parks</b> 1 space per caravan site
	<b>marinas</b> <ul style="list-style-type: none"> <li>• 0.6 spaces per wet berth</li> <li>• 0.2 spaces per dry storage berth</li> <li>• 0.2 spaces per swing mooring</li> <li>• 0.5 spaces per employee</li> </ul>
<b>Industrial</b>	
<b>service industry or showroom</b> <ul style="list-style-type: none"> <li>• 1 space per 100 m2 floor area or</li> <li>• 1 space per 2 employees whichever is greater</li> </ul>	<b>factories</b> 1.3 spaces per 100 m2 GFA
<b>light industry</b> <ul style="list-style-type: none"> <li>• 1 space per 200 m2 f.a. or</li> <li>• 1 space per 2 employees whichever is greater</li> </ul>	<i>not addressed</i>
<b>warehouse or saleyard</b> <ul style="list-style-type: none"> <li>• 1 space per 200 m2 f.a.,or</li> <li>• 1 space per 2 employees which ever is &gt;</li> <li>• + 1 semi-trailer space</li> </ul>	<b>warehouses</b> 1 space per 300 m2 GFA
<b>transport depot, timber yard or industry</b> 1 space per 2 employees	<b>road transport terminals</b> 1 space for each vehicle
	<b>container depots</b> 50 m2 per vehicle

*Note: As also indicated in the comparison of Planning Scheme provisions for some uses, direct comparisons cannot be drawn because of difference in the definition of use. The examples used above are presented as indicative comparisons.*

### 3.3.6 Conclusions - On- site Parking Standards:-

- Comparison of Planning Scheme standards

A comprehensive sample of relevant provisions from Tasmanian planning scheme shows that, direct comparisons are difficult to draw given the differing use classifications of the various Councils. Some of these standards are also somewhat dated and lack any statistical basis.

The Tasmanian Model Planning Scheme (Draft September 1998) standards were derived from a review of existing Tasmanian planning schemes and not from original research of development parking and access requirements. It is not considered that the standards would be relevant to a broad range of developments which have identified distinct parking and traffic generating profiles. Nevertheless, the performance based format is a useful structure on which to develop a more comprehensive set of provisions for Hobart.

- Comparison of C.H.P.S. Schedule E & RTA Guide

#### Residential:

- recent revisions to Schedule E (Rescode) based on floor area - derived from Amcord
- RTA provisions generally more stringent & differentiate between medium and high density flats.
- RTA contain detailed provisions for aged accommodation.

#### Health & Community Services & Education and cultural Institutes

- RTA does not address institutional uses - hospitals, schools - local surveys and/or research data is necessary to fill this gap in the database.
- RTA differentiates between consulting rooms and medical centres - consideration should be given to the inclusion of this emergent use. The relationship (in the RTA) to the number of surgeries rather than the size of the surgery (in Schedule E) is more relevant.

#### Educational & cultural institutions

- RTA does not address these uses - local surveys and/or research data is necessary to fill this gap in the data base.

#### Office & Commercial

- RTA has addressed a number of emergent commercial uses not specifically addressed in the Schedule E some local testing is considered necessary in regard to Takeaways.

#### Service Industry

- The RTA inclusion of provisions for functions in respect to motels is useful.

- Schedule E bed and breakfast specification has been recently assessed and should remain.
- RTA makes useful differentiation between 'traditional' and 'tourist' hotels.

Recreation and tourist facilities

- It would be useful to include RTA specification for marinas.

Industrial

- The standards are generally similar however, Schedule E has greater divisions of industrial use.

---

## 4. Surveys & Investigations

### **4.1 Review of Requirements to Protect Heritage and Streetscape Values**

#### 4.1.1 Existing City of Hobart Planning Scheme 1982

The existing Scheme, in Schedule E, provides protection to areas and places of cultural heritage significance with regards to the development of access and parking on-sites as noted below.

- Access

“E. 3. 1 Unless existing building, topography or **heritage considerations** dictate otherwise access to a street shall be constructed in accordance with the minimum widths set out below...”

and;

- Parking

“E. 7. 3 The Corporation may vary, limit, reduce or waive the total number of parking spaces to be provided on the site if the provision of the total number of required parking spaces would be detrimental to the cultural significance of a Heritage Area defined in Schedule F or would be detrimental to the cultural significance of a “place” listed in Schedule F.”

#### 4.1.2 Implications of Existing Provisions

Whilst these provisions do provide protection to places of significance, they are not very clear and somewhat convoluted. It is not clearly stated anywhere in Schedule E that Council has a policy that the development of access and parking shall not detract from the cultural heritage significance of areas and places as listed in its Schedule F (Heritage).

As well, it is not clearly stated that it is the responsibility of the proponent to provide the Council with the information regarding the cultural significance of their site to support their proposal.

The existing access and parking provisions do, however, give some flexibility to the use of a place of cultural significance. New uses can be established on a significant site without the obligation to provide code compliant access and parking if it would negatively impact on the significance of the place. On the other hand, however, the significance of a site may limit its economic viability if it is determined that on-site access and parking is needed for the commercial considerations of the proposed use, but are incompatible with its significance.

There also exists the opportunity, through the use of proposed new parking provisions, for Council to assist in the re-use/conservation of places of significance by waiving requirements for on-site parking if it would deny the economic viability of the development.

#### 4.1.3 New Provisions

- **Principles for the Protection of Heritage and Streetscape Values**

The new access and parking provisions should include a principle to be applied in regard to the protection of heritage and/ or streetscape values. It is therefore recommended that the following principle should be incorporated with respect to areas and places of cultural heritage significance.

*The provision of access and parking shall not detract from the significance of areas and places of significance defined in Schedule F or as listed by the Tasmanian Heritage Council. To this end the Council may vary, limit, reduce or waive its requirements for access and parking should it be detrimental to the cultural significance of the area or place, or deny the economic viability of the reuse of a place of significance.*

- **Performance Criteria**

Specific standards are not appropriate to the development of access and parking in areas or places of cultural heritage significance or streetscape character as each site is different. A performance criteria, instead, should be established to allow individual proposals to be evaluated on their merit. The proposed performance criteria is as follows:-

*The principal may be achieved where the following steps are taken by an applicant to evaluate the suitability of a listed site or a site within a listed heritage area ( pursuant to Schedule F of the Scheme ), for the development of vehicular access and parking:-*

*( i ) The preparation of a 'Conservation Plan', following the guidelines identified in the manual, "The Conservation Plan: a guide to the preparation of conservation plan for places of European cultural significance" by J. S. Kerr (unless such a plan has already been done) that shows due regard for the landscape of the site, its relationship to any buildings and the overall area as well as any buildings on-site. The Conservation Plan should be taken to the 'obligation' stage where it can be clearly identified what the significance of the place is and what the proponents of the proposal are obligated to conserve on the site.*

*( ii ) Utilising the principles of The Burra Charter, the access and parking proposals are established on the site with regards to the conservation of its significance. The access*



and parking must be compatible with the established uses on the site, ( that is they must not involve any change to the culturally significant fabric on the site ), must be substantially reversible, and must not diminish the significance of the place.

( iii ) Any of the provisions of this Schedule may be varied or not required by Council where it is determined from submitted evidence (which includes a 'Conservation Plan ' for the place) that the provision of access and parking on the site would deny the economic viability of the reuse of a place of significance .

## 4. 2 Review of Requirements for 'Equal Access' and Bicycle Parking

### 4.2.1. Equal Access

Parking provisions for persons with disabilities must have regard to the Disability Discrimination Act 1995 and the Australian Standards AS 2890.1 - 1993.

The relevant Standards determine the pavement requirements, the dimensions and location of spaces, and the accessibility and signage required for each disabled parking space.

Reference should be made to AS 2890.1 - Section 2.4.5 *Parking spaces for people with disabilities* which, in summary, requires that:-

- pavement for spaces shall be firm and relatively level with a fall not exceeding 1:40;
- the width of spaces shall be not less than 3.2 metres including an overlap allowance (allowance for 500 mm overlap into other, non-disabled parking spaces, which have firm and level surfaces as per the above pavement standard);
- spaces shall be located near the entrance to the relevant development and have a clear path of travel and; and
- spaces shall be identified with signs.

Table C of AS 2890.1 - 1993, below, establishes the guidelines for the number of disabled spaces which should be provided in various types of development. When applying the percentage space ratio, the minimum provision shall be not less than the minimum percentage indicated, and any part space outcome should be rounded up to the next whole number. The Standard allows for discretion to vary the minimum as required within the indicated range.

Type of facility	Recommended number of disabled spaces ( % of total )
Retail/ shopping	1-2 %
Transport	1-3 %
Community Services	2-3 %
Education - schools	2-3% or as justified

Type of facility	Recommended number of disabled spaces ( % of total )
Education - tertiary institutions	2% or as justified
Recreation	2-3%
Entertainment	3-4%
Hospitals	3-4% or as justified
medical centres	3% or as justified
Churches	as justified

Discussions with Council's engineering staff have confirmed that there are no apparent difficulties in the application of these standards or in the level of provisions required.

The Equal Access Committee which is comprised of representatives of Councils throughout the State has compiled a document "Making Access Happen - A Guide To Developing Disability Discrimination Act Action Plans For Local Government". The document identifies the actions which are necessary to give effect to the Act's requirements. Included are a number of issues to be considered in respect to parking. The following points are not otherwise covered by the Australian Standards and should be considered for inclusion within the provisions of a new Parking and Access Schedule:-

- A ramped kerb should be located in a suitable position to allow access to the developments which the spaces serve;
- Undercover parking (including spaces under trees or canopies) should have a minimum height allowance of at least 2500 mm;
- Undercover parking should be well lit to a minimum of 150 lux; and
- A suitable set down area of 3.8 m. minimum width should be included within 60m of the building entrance.

#### 4.2.2. Bicycle Parking Provisions

Bicycle travel is becoming increasingly recognised as an important mode of transport in Australia. By way of an example the Bureau of Transport and Communications Economics estimated that in 1986 the national average for a bicycle journey to work trips was 1.9% of the commuter work trips. The recently released National Bicycle Strategy has made estimates of usage levels ranging up to 7% of all urban and country town trips in Australia. It is worth noting that these significant proportions of travel have been achieved in environments which have limited facilities, strategies and programmes for cyclists. It is reasonable therefore that provisions for bicycle parking should be included with car parks which serve the general public or the employees and customers of commercial operations.

The Hobart City Council has adopted a BikePlan in 1997 (*The Hobart City Bike Plan 1997* - Consultant Sarah Boyle). The Plan's principal focus is on the establishment of a network of cycleways in the City. Whilst not specifying provisions for bike parking it does set general goals to improve facilities including parking for cyclists.

The Australian Standard 2890.3, 1993 - Bicycle parking facilities; establishes engineering requirements for bicycle parking. Principally these Standards aim to ensure that the security and protection of bicycles parked within or near a development are provided for in the parking design. The Standards recommend that cyclists are able to secure the frame and two wheels of a bicycle to a fixed, secure stand, preferably with the cyclist's own lock and chain.

The *Clarence City Council Municipal Bicycle Plan 1995* - (T. Peters in assoc. with J. Douglas & S. Boyle) recommended the following development standards for bicycle parking provisions based on research within Tasmania and nationally.

**Schedule..... Bicycle Facilities**

**A. Provision of Parking Facilities**

*Bicycle facilities shall be provided for any new commercial, service or industrial development (for uses identified in Table 1) and for any change or enlargement of such existing uses that would result in additional parking facilities being required. Provisions shall be either on-site or compensation paid to Council to enable their provision within 50 metres of the subject site, as determined by Council.*

**B. Number of Spaces**

*Provision of bicycle spaces shall be not less than in the ratio specified in Table 1 or as required by Council, at Council's discretion. The number of spaces shall be determined by the application of the ratio and rounding up to the nearest whole number.*

**C. Commencement only after Spaces Provided**

*The use of any land for any purpose specified in Table 1. shall not commence until the required number of bicycle spaces has been provided.*

**D. Design of Facilities**

*Bicycle parking facilities required by this schedule shall be sited to provide easy and safe access for dismounted cyclists and constructed to leave sufficient clearance between adjacent parked bicycles so that parking, locking and removing operations can be performed with reasonable, convenience and in safety.*

**E. Staff Facilities**

*Unless otherwise provided, staff change rooms and showers shall be*

*incorporated within in all developments that are subject to the provision of one or more bicycle parking spaces pursuant with the requirements of Table 5. 1. Such facilities can be provided at the discretion of Council.*

Clarence City Council  
Municipal Bicycle Plan

LANDUSE	EMPLOYEE		VISITOR	
	No. of Spaces	Class	No. of Spaces	Class
Amusement Parlour			2 plus 1 per 50m <sup>2</sup>	2
Apartment House	1 per 4 hab rooms	1	1 per 16 hab rooms	2
Art Gallery	1 per 1500m <sup>2</sup> gfa	1	2+1 per 1500m <sup>2</sup> gfa	2
Bank	1 per 200m <sup>2</sup> gfa			
Cafe	1 per 25m <sup>2</sup> public area			
Consulting Rooms	1 per 8 practitioners	1	1 per 4 practitioners	2
Drive-in Shopping Centre	1 per 300m <sup>2</sup> sales floor	1	1 per 500m <sup>2</sup> sales floor	2
Flat	1 per 3 flats	1	1 per 12 flats	2
Furn & Carpet Sales	1 per 750m <sup>2</sup> sales floor	1	1 per 1000m <sup>2</sup> sales floor	2
General Hospital	1 per 15 beds	1	1 per 30 beds	2
General Industry	1 per 150m <sup>2</sup> gfa	1		
Health Centre	1 per 400m <sup>2</sup> gfa	1	1 per 200m <sup>2</sup> gfa	2
Hotel	1 per 25m <sup>2</sup> bar floor area & 1 per 100m <sup>2</sup> lounge, beer garden	1 1	1 per 100m <sup>2</sup> lounge, beer garden & 1 per 25m <sup>2</sup> bar floor	2 2
Library	1 per 500m <sup>2</sup> gfa	1	4 plus 2 per 200m <sup>2</sup> gfa	2
Light Industry	1 per 1000m <sup>2</sup> gfa	1		
Major Sports Ground	1 per 1500 spectator plac	1	1 per 250 spec places	2
Motel	1 per 40 rooms	1		
Museum	1 per 1500m <sup>2</sup> gfa	1	2 plus 1 per 1500m <sup>2</sup>	2
Office	1 per 200m <sup>2</sup> gfa	1	1 pr 750m <sup>2</sup> over 1000m <sup>2</sup>	2
Place of Assembly			1 per 150m <sup>2</sup> gfa	2
Public Hall/Place of Assembly			1 per 50 seats/max. capac	2
Research Centre	1 per 300m <sup>2</sup> gfa	1		
Residential Building	1 per lodging rooms	1	1 per 16 lodging rooms	2
Restaurant	1 per 100m <sup>2</sup> public area	1		
School	1 per 5 pupils over year 4	2		
Service Industry	1 per 100m <sup>2</sup> gfa	1		
Service Premises	1 per 200m <sup>2</sup> gfa	1		
Shop	1 per 300m <sup>2</sup> gfa	1	1 pr 500m <sup>2</sup> over 1000m <sup>2</sup>	2
Swimming Pool			2 per 20m <sup>2</sup> of pool area	2
Take-away	1 per 100m <sup>2</sup> gfa	1	1 per 50m <sup>2</sup> gfa	2
Technical Institute/University	1 per 100 f/t students 2 per 100 f/t students	1		

Any use not specified to be determined by the Council.

TABLE 5.1 - BICYCLE PARKING SPACE PROVISION

Notes:

- 1 Bicycle parking space requirements have been sources from the Shepparton Bicycle Study, Gutteridge Haskins & Davey et al, March 1990.
- 2 gfa = gross floor area
- 3 hab = habitable

- 4 "Class 1 bicycle parking facility" means a locker, locked enclosure or supervised area providing protection for each bicycle parked therein from theft, vandalism and weather.
- 5 "Class 2 bicycle parking facility" means a stand or other device constructed so as to enable the user to secure by locking the frame and one wheel of each bicycle parked therein. May or may not require the user to provide locking equipment.
- 6 "Class 3 bicycle parking facility" means a stand which holds bicycles by either the front or back wheel to which the user can secure one wheel only with user provided locking equipment.

### 4.2.3 Conclusions

- Equal Access

There are no apparent difficulties in the application of the relevant Australian Standards for parking for people with disabilities. However the following points are not otherwise covered by the Standards and should be considered for inclusion within the provisions of a new Parking and Access Schedule.

- A ramped kerb should be located in a suitable position to allow access to the developments which the spaces serve.
- Undercover parking (including spaces under trees or canopies) should have a minimum height allowance of at least 2500 mm.
- Undercover parking should be well lit to a minimum of 150 lux.
- A suitable set down area of 3.8 m. minimum width should be included within 60m of the building entrance.

- Bicycle Parking Provisions

The Hobart City Bike Plan includes general goals to improve bicycle parking facilities. To achieve these goals it is necessary to set standards for bicycle parking within public car parks and those car parks that are to be generally accessible to the public. An appropriate Standard for bicycle parking provisions has been identified in the Clarence City Council Municipal Bicycle Plan. It will however be necessary to translate the landuses identified in these provisions to accord with those in the proposed new schedule and where possible simplify their application.

## 4.3 Review of Sites Identified as Suitable for 'Public' Car Parking

### 4.3.1 Introduction

A number of potential locations for off street public car parks were identified in three previous studies:-

- The North Hobart Car Parking Investigation 1993;
- The Sandy Bay Car Parking Investigation 1993; and
- Frame District Parking Project 1988.

All sites in the North Hobart and Sandy Bay Study areas (where car parking developed from cash-in-lieu funds is most likely) were assessed for their practical utilisation as car parks and other site options were considered.

With regard to the carparks identified in the Frame District Project, the sites identified in areas of high priority for a parking provision were inspected to determine if they were still vacant and available for future use.

The findings are as follows:-

### 4.3.2 Sandy Bay

The study identified three potential off street sites as follows:-

*-Construction of carpark at No 57 Queen Street*

*Requires demolition of House*

*Number of parking spaces = 20 ±*

*Estimated cost = \$ 169,000 + (then)*

*Refer Plan 6.3.6 (a) - Attached*

*Construction of carpark No. 48 King Street*

*Kingsway Motors*

*No. of parking spaces = 35 ±*

*Estimated cost - Not available but likely to be considered ie. \$ 500,000 + (then)*

*Refer Plan 6.3.6 (b) - Attached*

*No. 159 Sandy Bay Road*

*Commonwealth Bank site*

*Four options for use of this site are shown on Plans Nos. 6.3.6 (c),(ci),(cii),(ciii),(civ) (Attached )*

*No. of parking spaces - varies from 8 to 15 ±*

---

*Estimated cost - Acquisition \$ 156,000 to \$200,000     }*  
*Construction \$ 12,000 to \$ 30,000            } (then)*  
*Relocation of HEC substation \$ 50,000+}*

The situation in relation to the identified sites remains unchanged with the exception that No. 159 Sandy Bay Road is now used as a shop. Therefore the sites potential for redevelopment is little changed, however the following should be noted:-

**No. 57 Queen Street**

- would only relate to the immediately adjacent shops;
- would tend to increase non residential traffic movements in Queen Street;
- Queen Street is one way and access to the site is reasonable only for south bound traffic from Sandy Bay Road;
- it's development as a car park would tend to diminish residential amenity for the nearby houses; and
- a proposed carpark could not be easily integrated within a reasonable search pattern for drivers seeking parking within the Sandy Bay Shopping Centre.

**No. 48 King Street**

- this site has a high level of existing development and so suffers from a comparatively high acquisition and development cost;
- access to the site is available from Queen Street however use of this accessway would impact upon the amenity of 55 and 57 Queen and introduce non-residential traffic into Queen Street as mentioned above;
- the site is centrally located and would service a substantially number of commercial sites within the shopping centre and is in an area that the study found to be in greatest deficiency for parking;
- can be integrated within a reasonable search pattern in relation to other car parks;
- would impact upon existing residential amenity for adjacent properties in King Street and would increase non-residential traffic movements in this street; and
- the site frontage onto King Street is located close to the King Street/Sandy Bay Road Intersection, specific access measures would be required to insure that the safety and function of the signal controlled intersection was not diminished.



### **No. 159 Sandy Bay Road**

- can be integrated with the Purity car park and other on-site car parks for premises in King Street;
- can be incorporated within a reasonable search pattern in relation to other car parks;
- can be reasonably accessed by north and south bound traffic by utilising the King Street/ Sandy Bay Road junction;
- would have minimal impact upon residential amenity - there are no residences immediately adjacent and traffic movements would be principally directed away from residential streets; and
- there are a number of development options available as the various figures show.

It is considered that this is the best of the identified sites.

### **Lower Deck Magnet Court**

An option not considered in the study is the re-development of the existing lower Magnet Court parking deck for public use. The deck is currently dedicated to tenants of the Magnet Court shops and offices. As currently laid out the car park accommodates 45 spaces however this number may marginally decrease if an alternative layout is implemented for public use. The site has several advantages in comparison to the identified options, these are:-

- it is existing, does not require the demolition of any commercial properties or the reduction in retail service levels at the centre;
- services the area of greatest demand;
- can be integrated with the existing upper deck car park by alterations to the entrance ramp to improve circulation (this would require the loss of one or two existing upper deck spaces);
- relates well to the Mayfair car park and forms part of a logical car park search pattern which will not substantially intrude upon residential streets;
- allows for spiral circulation of traffic within the car park and will tend to alleviate the current 'choke point' which can develop through cars waiting for spaces to become vacant on the top deck ie. - cars will be able to search on the top deck then enter lower deck and if the car park is full , exit onto Princess Street; and
- the only disadvantage would be the obvious displacement of tenant parking however options exist to accommodate tenants in tied car parks in the Mayfair car park which is under utilised or to retain some dedicated spaces in the lower Magnet Court deck.

### 4.3.3 North Hobart Shopping Centre

The North Hobart Car Parking Study identified four options to increase off- street parking (refer plans 6.3.2 (a-e) as attached). These centred on land between Lefroy and Burnett Streets which adjoins the 'Better Cities' public housing estate off Lefroy Street and the decking of the existing 'Purity' carpark. The potential to develop the options as identified remains, with the extension of the existing Lefroy Street car park as shown in Option (b) considered to be the most practical. It is noted however that the Study findings did not support the development of further off street public car parks, but recommended a number of management provisions for the existing car parks to enhance their use such as improved lighting and pedestrian access provisions.

Requirements for off street car parking may change with any re-development of the existing 'Purity' supermarket. Further consideration of Option (e), the decking of the existing 'Purity' public car park may be justified as part of any such re-development.

### 4.3.4 Hobart Frame District

The 'Frame District' refers to the predominantly commercial and retail areas surrounding the CBD as identified in the Frame District Parking Project report (completed in 1988). In Table 1 - 'Analysis of Need for Central Local Car Parks' - a number of locations were identified as having a high priority for the development of an off street car park. The sites identified in each of these areas were inspected and their availability for a car park development was noted. The various sites in these high priority areas are listed below and it is noted whether each remains vacant or has been built on. Maps of the various sites are attached.

- Macquarie/Molle Streets (Map 5). This site has access off Dennison Lane. This site remains vacant.
- Ispahan Avenue (Map 11)The site has been incorporated within an infill residential site which is presently under construction. It is no longer available for car parking.
- Wheatsheaf Area off Davey Street (Map 12) . A residential infill development has occurred on a portion of the site. The areas to the rear of 274 - 272 Macquarie Street remains vacant.
- Berea Street (Map 15) . This site is no longer available, it has been developed for two town houses.

### 4.3.5 Conclusion:-

Various options exist within North Hobart and Sandy Bay Shopping Centres for the creation of off-street car parks. Previous studies have shown that additional off -street parking in the North

Hobart centre is not warranted, however this situation should be reviewed upon any re-development of the existing 'Purity' supermarket site.

The Sandy Bay Car Parking Investigation concluded that there was a shortfall of 26 spaces within the in the centre. All of the identified potential off-street sites remain substantially as they were when they were identified by the study in 1993. However, the sites identified in King and Queen Street are not favoured for development at this time. The old Commonwealth Bank site at 159 Sandy Bay is the preferred site of those identified in the report. A preferred option not previously identified, is considered to be the redevelopment of the lower deck of the Magnet Court car park for public carparking.

The North Hobart Car Park Investigation found that there was insufficient justification for further off-street car parks in North Hobart. However this situation should be reviewed should any substantial redevelopment and extension of the 'Purity' supermarket or other major commercial site within the Centre occur . Of the identified sites the extension of the existing Lefroy Street car park as shown in Option (b) is considered to be the most practical.

Of the sites located within high priority areas of the Frame District only the site off Dennison Lane in the Macquarie/Molle Street area (Map 5 of the report) remains vacant. All other locations have either been totally or substantially developed for infill housing. It is beyond the scope of this study to conduct detailed supply/demand investigations of the Frame District, however if sites are to be reserved to service future demand within the nominated high priority areas it will be necessary to undertake further detailed analysis to update the data from the Frame District Study.

## ***4.4 Survey of Parking Generation for Specific Land Uses***

### **4.4.1 Objective**

The main objective of the field surveys was to sample test the efficacy for local conditions of standards identified by the preceding research. Specifically, a range of land uses were selected in consultation with the client to assess the relevance of the current Schedule E Standards and those specified in the RTA Guide and to provide supplementary data where necessary.

### **4.4.2 Introduction**

The evaluation process comprised manual field counts and automatic loop ground count surveys for a range of specified uses and a number of suburban shopping centres and

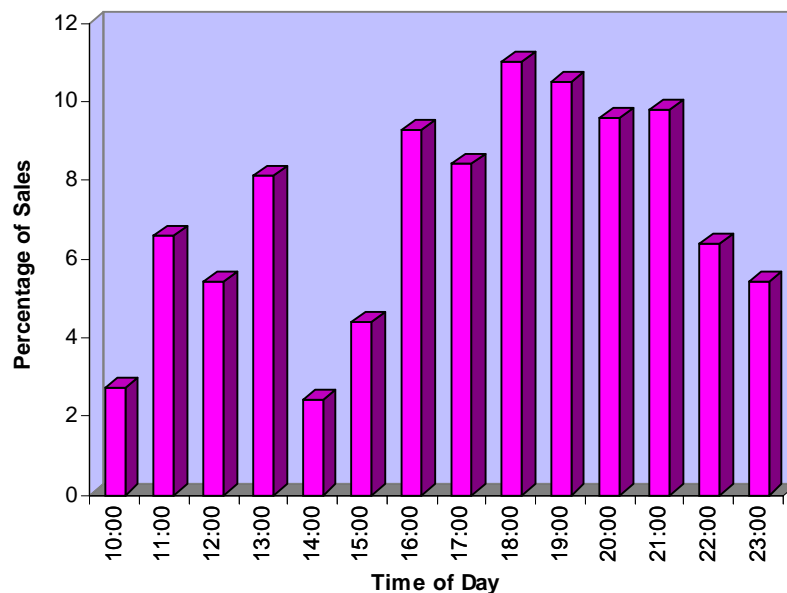
residential areas. It is important to note that the field surveys were of a sampling scale only and more detailed surveys may be necessary if more definitive results are required.

The field survey data has been supplemented where appropriate from a local survey data base which has been obtained from local traffic impact assessments and is held by the consultants. The inclusion of this local data is intended not only to support the limited sampling field survey data but also to highlight the value of the traffic impact assessment data, from development applications, which is held by council. The survey and data base collation results are discussed under specific land use heading.

### 4.4.3 Selected Land Uses

- Drive Through Bottleshops

Considerable survey information, relative to the level of traffic generation and parking rates, has been collected, by the consultant, for Drive Through Bottleshop operations within the Cities of Glenorchy and Hobart. Given the level of demand for this type of facility and the degree of impact which can arise from such developments, this information is considered to be of sufficient importance to be included in this report.



**Temporal Distribution of Drive Through Bottleshop Customer Sales**

(Extracted from 9/11 Brooker Inn Sales Data)

The temporal distribution of customer sales data which is represented in the above graph is also representative of the typical weekday traffic and parking generation temporal distribution profiles for Drive Through Bottleshop operations.

The field surveys consisted of recording the time of customer entry and length of stay for each of the drive through bottle shop operations. A shorter time frame was used for the St Ives and Gasworks site Bottleshops as the survey resource was limited and it was felt that the data from these sites could be further extrapolated from the customer sales data.

The results of the surveys have been collated and are recorded in the following tables:-

**Aberfeldy, Davey Street**

Friday, 4<sup>th</sup> June 1999

Time of Day	Number of Cars		
	Arrivals	Av. Stay	Max. Stay
10.00 a.m. to 11.00 a.m.	19	3.1	6
11.00 a.m. to noon	51	8.5	12
noon to 1.00 p.m.	45	7.5	11
1.00 p.m. to 2.00 p.m.	51	8.5	11
2.00 p.m. to 3.00 p.m.	63	10.5	16
3.00 p.m. to 4.00 p.m.*	69	11.5	16
4.00 p.m. to 5.00 p.m. *	108	18.0	21
5.00 p.m. to 6.00 p.m.	82	13.6	18

\*lane blockages and queuing onto Davey street were observed to occur during these survey periods

**ST Ives, Sandy Bay Road**

Friday, 11<sup>th</sup> June 1999

Time of Day	Number of Cars		
	Arrivals	Av. Stay	Max. Stay
4.00 p.m. to 5.00 p.m.	67	7	15
5.00 p.m. to 6.00 p.m.	64	5	11
6.00 p.m. to 7.00 p.m.	34	5	9

**Gasworks. Davey Street and Macquarie Street**

Friday, 18<sup>th</sup> June 1999

Time of Day	Number of Cars		
	Arrivals	Av. Stay	Max. Stay
4.00 p.m. to 5.00 p.m.*	71	8	14
5.00 p.m. to 6.00 p.m.	86	17	12
6.00 p.m. to 7.00 p.m.	75	5	9

\*manual control of parking lanes was applied, by the Bottleshop staff, from 4.40 p.m.

onwards to ensure that no queuing occurs from the site onto the surrounding arterial roads

The Aberfeldy Hotel has five lanes with one designated as “no standing” despite this configuration major blockages back onto Davey Street were observed to occur at 3.30 p.m., 4.20p.m., 4.50 p.m. and 4.50 p.m. The St Ives Hotel has four service lanes and the Gasworks has four service lanes with two designated “no standing” lanes and adverse site queuing was observed from either of these sites.

There is a wide variability with the service rates generated by drive through Bottle shop operations and these are generally caused by the type of customer (browse or quick serve), number of service delivery counters, rate of service delivery and service lane configurations. There is a high probability of cars, which have parked behind other cars in the queue, being blocked in and for this reason multiple service lanes with parallel through lanes are recommending for consideration when evaluating development applications for Bottleshops.

Some 15 years ago the Department of Transport in conjunction with the Liquor Licensing Board developed guidelines for Bottleshop driveways. These guidelines have been reviewed in conjunction with the current RTA guidelines and the following specific access driveway criteria developed:-

- at least two service lanes with a separate parking area for browse customers;
- precautions such as clear through lanes should be considered to reduce the likelihood of vehicle queues extending back onto the street;
- 30 metres of service lane prior to the service centre should be provided;
- internal road service lane widths of 3.0 metres are desirable however lanes widths of 2.4 metres may be allowed; and
- a separate access and exit should be provided with a one way, preferably clockwise, internal traffic circulation.

The surveyed Bottleshop sites, with the exception of the Aberfeldy Bottleshop, were found to be operating satisfactorily within the above criteria. The Aberfeldy site consistently has queuing back onto Davey Street and is an example of the problems which can occur if the recommended guidelines are not applied. It is therefore recommended that the above criteria be adopted for Bottleshop developments.

- **Doctor’s Surgeries and Pharmacies**

The objectives of these surveys was to assess the traffic generation rates for a sample of Doctor’s Surgeries and Pharmacies within the Hobart Municipality and to identify the shared parking and customer interactions, if any, between the two business operations.

Surveys were undertaken of the pedestrian and car generation rates (number of cars per hour), car parking accumulation rates (average and maximum stay) and shared trip numbers (visits to both) for two typical suburban sites.

The results of these surveys have been collated and tabulated in the following tables:-

**Hill Street, West Hobart**

Survey - 8<sup>th</sup> June 1999

Time of Day	Visits to Doctor			Visits to Chemist			Visits to Both			Peds
	No Cars	Av. Stay	Max. Stay	No Cars	Av. Stay	Max. Stay	No Cars	Av. Stay	Max. Stay	
8-9	4	42	58	2	7	11	0	0	0	4
9-10	7	44	40	5	4	10	2	7	23	14
10-11	4	50	50	7	4	10	0	0	0	20
11-12	5	12	52	3	18	15	0	0	0	14
12-1	2	3	7	3	5	7	0	0	0	9
1-2	1	5	5	7	5	7	1	10	10	5
2-3	5	17	29	14	6	7	1	4	4	4
3-4	11	19	36	8	9	30	2	8	10	13
4-5	6	12	15	12	4	6	0	0	0	6

**Augusta Road, Lenah Valley**

Survey - Wednesday 9<sup>th</sup> June 1999

Time of Day	Visits to Doctor			Visits to Chemist			Visits to Both			Peds
	No Cars	Av. Stay	Max. Stay	No Cars	Av. Stay	Max. Stay	No Cars	Av. Stay	Max. Stay	
8-9	7	44	80	6	6	10	1	35	35	2
9-10	7	27	47	6	2	5	0	0	0	2
10-11	11	25	77	2	11	12	4	53	77	2
11-12	8	25	58	8	5	13	2	54	58	3
12-1	4	26	50	1	18	18	1	2	2	2
1-2	10	27	66	5	7	15	0	0	0	4
2-3	3	13	21	6	9	15	0	0	0	5
3-4	6	24	38	7	5	6	0	0	0	0
4-5	No activity after 4.15 p.m.									

The following observations have been made from the field surveys of the neighbourhood doctor's surgeries and pharmacies:-

- The patient trips are predominantly car based although the Hill Street site generated a significant amount of pedestrian traffic which was possibly due to its proximity to elderly peoples accommodation;
- typically the length of stay associated with pharmacies is around 10 minutes with doctor's surgeries generating longer stays which in several cases were greater than one hour. These longer stays were possibly due to waiting to see the doctor rather than time with the doctor stays possibly associated with conversation rather than business;
- the maximum hourly patient parking demand for each of the Centres was 11 cars with the peak occurring between 3.00 and 4.00 p.m. at Hill Street and 10.00 and 11.00 a.m. at Augusta Road;
- both sites have an off street parking supply and this is predominantly used by the staff;
- there were, rather surprisingly, a low number of shared parking trips between the doctors surgery and the chemist at both of the surveyed sites; and
- the on street parking at both sites was convenient and in plentiful supply and was preferred by the patients.

It can be concluded from the field surveys that staff (including doctors and chemists) tend to occupy the off street parking spaces when available. The patient use of convenient on street parking when it is available would suggest that Planning Scheme requirement for this type of combined neighbourhood medical facility could be lessened provided that there is a surplus of on street parking supply. The variance of the parking generation and accumulation rates across the day also suggests that there would be options to exercise "performance based" assessments based on the particular areas demographics. Notwithstanding these comments it is recommended that the existing Schedule E parking requirements be retained with a discretion for "performance based" assessment.

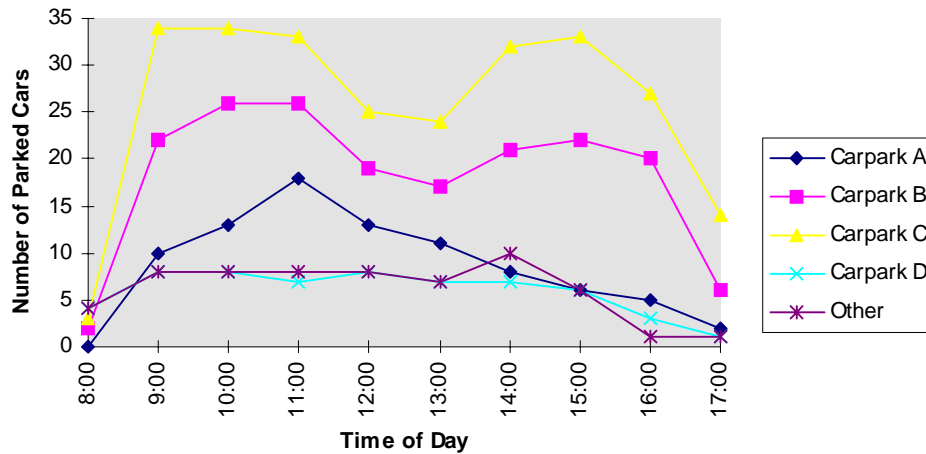
- **Educational Institutions**

No specific surveys were undertaken to assess the traffic generation and parking accumulations of educational institutions. The information which is contained in this section has been extracted from traffic impact assessments which have been undertaken for the Department of Education and the Arts and various Council's around Tasmania.

Traffic impact assessments have been undertaken for the Guilford Young, Alanvale and Don Matriculation Colleges. A typical on site parking accumulation graph for the Don College is



depicted in the Graph. Don College has around 1200 students and staff, an ample supply of off street parking supply and around 50% of students travel by bus.



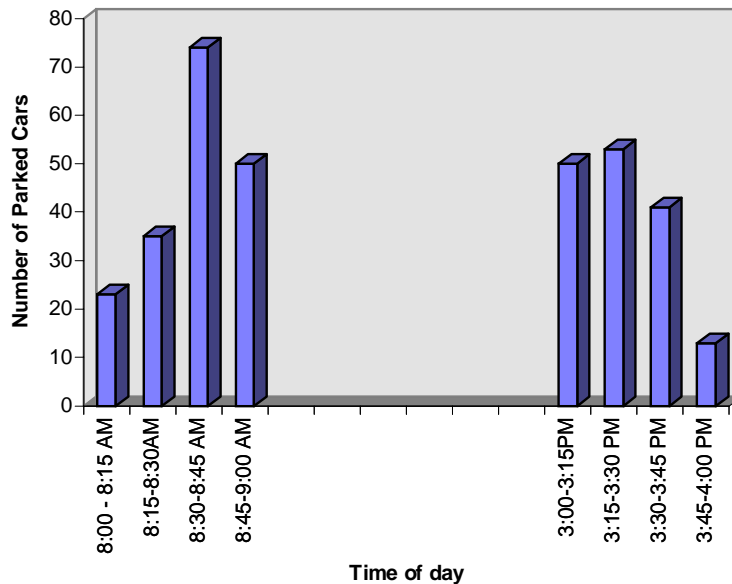
### Typical Matriculation College Car Park Accumulation

Extract from Don College Traffic Impact Assessment - 1999

The following key points have been obtained from a review of the Matriculation College traffic impact assessments:-

- When conveniently located on street parking is available it will be used by both staff and students in preference to on site parking;
- once students turn seventeen then there is a tendency to drive to school this shows in an increase in students driving to school towards the end of the year;
- classes tend to run in blocks from 9.00 a.m. to 5.00 p.m. with students not being required to attend all classes - this tends to mean that students have free time and move on off the campus a number of times throughout the day;
- parent pick up and set down are not significant traffic generators;
- bicycle use is not common possibly due to peer pressure;
- students with cars tend to move off the campus - reference the noon to 1.00 p.m. dip in the temporal distribution graph;
- in situations where there is strong competition for the on street parking supply by commuters, such as occurs at Guilford Young College in Barrack Street, then the student parking demand is suppressed; and
- teaching staff take given for school bus parking and servicing and this should preferably be on site or at the least along the school boundary with left hand side loading.

Traffic impact assessments of the Sorell High School and Sacred Heart School identified the following key points.



TYPICAL COMBINED SECONDARY AND PRIMARY SCHOOL PARKING ACCUMULATION

(Extract from the Traffic Impact Assessment Sacred Heart College)

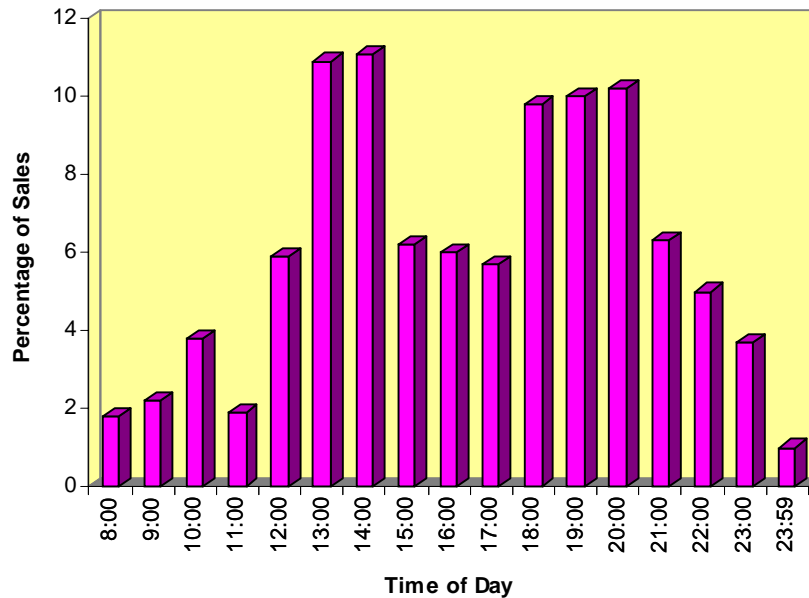
The following characteristics can be attributed to this type of College operation:-

- staff have taken up all of the on-site parking other than for the designated “visitor parking” spaces;
- some staff parking can be expected to overflow onto the conveniently located on-street parking space;
- there is a general tendency towards parents driving their children to and from school;
- parents generally set down their children in the morning as close as possible to the main entrance and with a minimum stay in the available parking space;
- the afternoon pick up period generally causes the most congestion with parents arriving early and parking whilst they wait to pick up their children;
- the maximum congestion periods occur between 8.30a.m. and 9.00 a.m. in the morning and 2.30p.m. to 3.30 p.m. in the afternoon; and
- allowance needs to be for the school bus servicing and it should be noted that this service requires quick set down in the morning with extended parking for the afternoon pick up.

The above data supports the retention of the Schedule E requirements for staff and visitor parking at schools and Colleges.

- Fast Food Outlets

These surveys assessed the traffic generation and parking accumulation rates for samples of the speciality the typical franchised fast food outlet and the smaller suburban take away food stores.



**Typical Temporal Distribution of Fast Food Outlet Sales**

( Extract from McDonald's sales data)

The "Typical Temporal Distribution of Fast Food Outlet Sales" data graph was used to select the survey periods of noon to 2.00 p.m. and 5.00 p.m. to 7.00 p.m. The survey results for the fast food outlets are presented in the following tables:-

**KENTUCKY FRIED CHICKEN**

Main Road, Moonah

Date	Time of Day	Car based Customers						Number of Peds
		Parked			Drive Through			
		Number	Av. Stay	Max. Stay	Number	Av. Stay	Max. Stay	
Sunday 6 <sup>th</sup> June 1999	12-1	29	12	35	29	7	9	1
	1-2	26	12	45	49	3	10	6
	5-6	7	13	30	30	6	9	8
	6-7	39	8	14	51	7	10	4
Tuesday 8 <sup>th</sup> June 1999	12-1	25	20	37	33	6	9	15
	1-2	10	14	35	35	5	8	3
	5-6	28	10	32	32	6	11	1
	6-7	24	9	57	57	8	12	2

**BURGER KING**

Elizabeth Street, North Hobart

Date	Time of Day	Car based Customers						Number of Peds
		Parked			Drive Through			
		Number	Av. Stay	Max. Stay	Number	Av. Stay	Max. Stay	
Sunday 13 <sup>th</sup> June 1999	12-1	31	18	36	14	3	3	18
	1-2	45	7	34	24	3	5	13
	5-6	28	10	37	19	4	6	5
	6-7	32	8	35	18	3	5	16
Tuesday 15 <sup>th</sup> June 1999	12-1	24	16	45	28	6	7	60
	1-2	24	5	21	23	3	7	69
	5-6	34	13	56	19	3	5	12
	6-7	29	5	15	18	4	6	5

**MACDONALDS**

Main Road Moonah

Date	Time of Day	Car based Customers						Number of Peds
		Parked			Drive through			
		Number	Av. Stay	Max. Stay		Av. Stay	Max. Stay	
Thursday 17 <sup>th</sup> June 1999	12-1	41	13	37	19	6	8	8
	1-2	45	14	39	27	5	6	10
	5-6	36	10	36	29	6	7	12
	6-7	32	11	34	27	4	6	11
Saturday 19 <sup>th</sup> June 1999	12-1	27	15	41	36	5	6	6
	1-2	29	17	33	35	6	7	5
	5-6	31	15	35	33	5	6	4
	6-7	28	12	22	54	7	9	5

The following observations can be made from the above larger fast food take away survey results:-

- Burger King, possibly because of its close proximity to the Elizabeth College, generates a significant pedestrian customer demand;
- available on - street parking will often be used in lieu of the fast food lane if it is conveniently located;

- at times of peak activity customers will often leave the site and seek an alternative fast food source rather than queue to get a parking space;
- service rates tend to increase to match the demands of the busiest customer activity; and
- the McDonald's outlets exhibit similar traffic and parking characteristics despite being located in different suburbs.

All of the outlets exhibit vehicular traffic and parking distributions which are similar, although slightly lower, than the RTA guidelines. This similarity suggests that the RTA data can be adopted without the need for more rigorous testing.

The survey results for the typical suburban take away outlets are presented in the following tables:-

**NEW TOWN MINI MARKET**

Main road New Town

Date	Time	Car based Customers			Pedestrians
		Number	Av. Stay	Max. Stay	
Wednesd ay 2 <sup>nd</sup> June 1999	12-1	12	4	18	15
	1-2	13	3	5	18
	5-6	12	3	18	8
	6-7	16	4	14	6
Saturday 5 <sup>th</sup> June 1999	12-1	10	4	11	21
	1-2	8	6	17	17
	5-6	8	6	24	6
	6-7	8	4	18	14

**MYKONOS**

Sandy bay Road, Sandy Bay

Date	Time	Car based Customers			Pedestrians
		Number	Av. Stay	Max. Stay	
Tuesday. 1 <sup>st</sup> June 1999	12-1	10	3	10	32
	1-2	10	5	16	24
	5-6	11	7	42	28
	6-7	17	3	8	22
Saturday 5 <sup>th</sup> June	12-1	14	4	20	34
	1-2	6	3	12	32

1999	5-6	21	3	12	24
	6-7	22	4	11	25

**STEVE'S KEBABS**

Elizabeth street, North Hobart

Date	Time	Car based Customers			Pedestrians
		Number	Av. Stay	Max. Stay	
Thursday. 2 <sup>nd</sup> June 1999	12-1	8	6	15	24
	1-2	6	4	13	23
	5-6	8	5	19	13
	6-7	8	7	19	8
Saturday 5 <sup>th</sup> June 1999	12-1	9	4	10	5
	1-2	11	3	5	12
	5-6	11	6	15	10
	6-7	9	6	12	6

All of the surveyed stores provide a neighbourhood service which is evidenced by the amount of walk up customer demand.

The traffic generation data supports the following observations:-

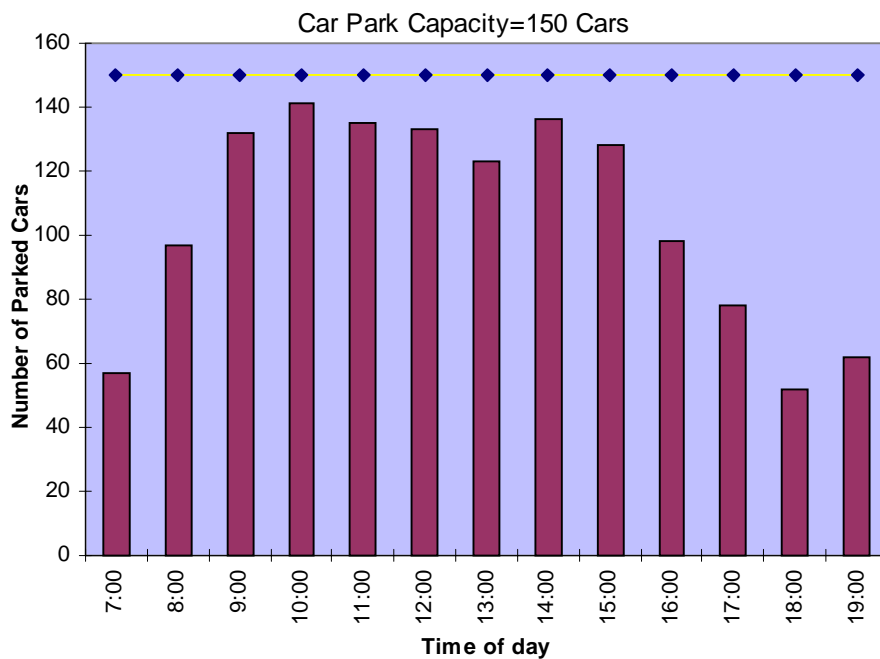
- all of the surveyed stores provide a neighbourhood service which is evidenced by the amount of walk up customer demand;
- the vehicular customer demand rate is surprisingly similar averaging around 10 cars per hour with the only exception being Mykonos which goes to about 20 vehicles per hour on Saturday afternoon;
- the average service times for all stores is around 5 minute per customer;
- the parking demand for all vehicle based customers was observed to be adequately serviced from the available on-street supply with no queuing for a space; and
- the lunch time and afternoon customer generations are similar for each location and between stores.

The results from the field surveys tend to support the RTA classification of fast food outlets.

- HOSPITALS

There are four main Hospitals located within the City of Hobart and these are the Royal Hobart Hospital, St Helen’s Hospital, St Johns Hospital and Calvary Hospital. The first two hospitals are located within Central Commercial and Administrative Zone Precincts and have significant shortfalls in parking and the latter two have surplus in parking under the Schedule E requirements. Calvary Hospital has made a conscious decision to provide for all employee parking on site, arguably to the detriment of access to visitor parking, and since taking this decision there is evidence to suggest that the employee car parking demand has risen to meet the available parking supply and on street parking is still an issue, which raises the question of the cost effectiveness of this approach.

Considerable work has been done, over the past few years, on the traffic and parking accumulation rates for St Johns and Calvary Hospitals. The relevant data from these surveys provides a valuable insight into hospital operations and for this reason has been collated and listed in this report.

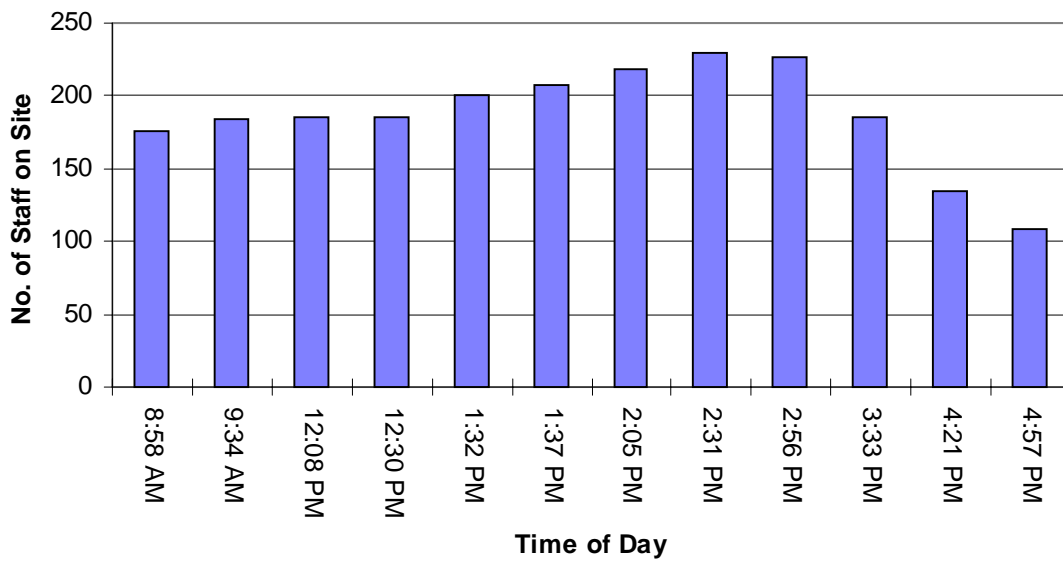


**Temporal Distribution of Hospital Car Park Usage**

Extract Traffic impact analysis St Johns Hospital (109 beds) - January 1996

Survey 30<sup>th</sup> March 1995

It will be noted from the graph that the peak weekday traffic demand for St Johns Hospital is between 9.00a.m. and 4.00 p.m. and this a typical for all of the other three Hobart hospitals.



**Temporal Distribution of Peak On -Site Staffing Levels**  
 (extract from St Johns Hospital Attendance Records)

The on-site staffing levels graph shows a fairly flat on - site staff attendance level throughout the typical working day. Over the 24 hour working day the staff generated traffic peaks from hospitals can be expected to coincide with the rostered shifts which occur at the following times:-

- 7.00 a.m. to 3.30 p.m. - approximately 64% of staff;
- 3.30 p.m. to 10.30 p.m. - approximately 21% of staff;
- 10.30p.m. to 7.00 a.m. - approximately 15% of staff.

The Australian Bureau of Statistics publication “Private Hospitals” suggests that there is a current trend for hospital bed occupancies to be in the order of 65.8% and for example the 1996 St John’s Hospital figures record around 67.9%. Based on the evening car park parking accumulation rate this suggests that the Hobart Planning Scheme Schedule E requirement of 1 space per 2 beds, 1 space per 2 employees and 1 space per doctor is acceptable.

There has been a tendency in more recent times for hospitals, both public and private, to move towards less hospital bed stay, day surgery and specialist consulting rooms. A St John’s Hospital Tenant survey of six medical consultants occupying hospital consulting suites identified an average of 38 patients per doctor per day over a typical working week. These changes to the provision of on site medical facilities have contributed to the changing hospital traffic and parking generation patterns.

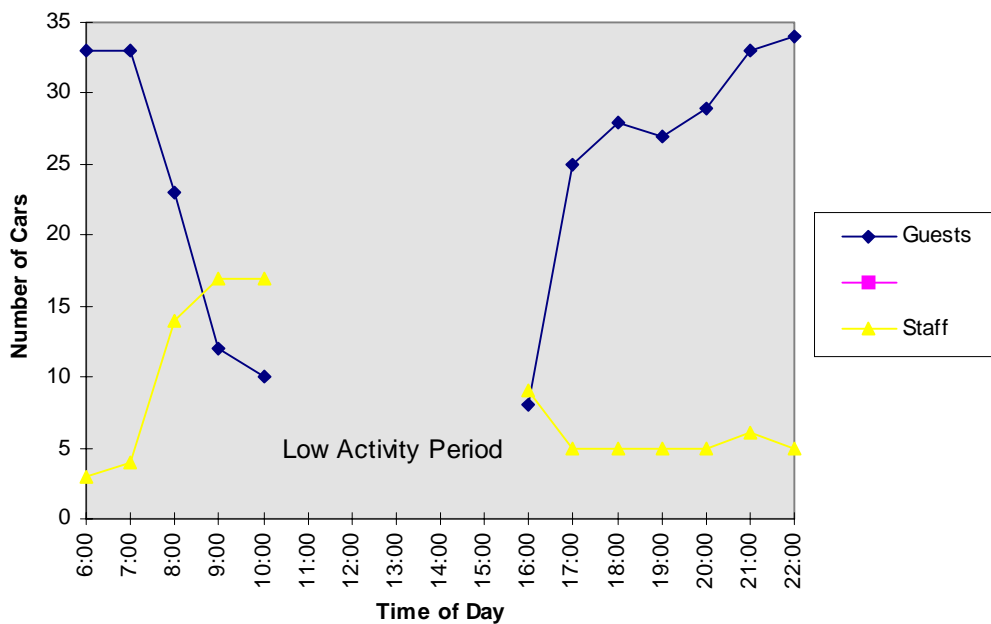


Evidence suggests that, although the existing the Schedule E parking provisions for hospitals, may be adequate, the dynamic nature of the use indicates that, in the future, site specific assessments may prove more appropriate. Any proposed site parking plan should have regard to the following criteria which are aimed at minimising impacts on surrounding streets and providing a cost - effective on site parking supply:-

- car parking search patterns should not flow through sites and exit onto residential streets;
- visitor parking spaces should be easily accessed; and
- hospital boundary on street car parking could be considered as part of the overflow from site parking supply.

• HOTELS

The objective of these surveys was to survey peak traffic generation rates for a representative sample of hotels and to utilise existing data to review parking generation rates.



**Temporal Traffic Distribution for a Typical Hotel**

(Extract from Traffic Impact Assessment for the “The Old wool Store”)

The Temporal Traffic Distribution graph was used as the basis for selecting the traffic survey periods of 9.00 a.m. to 11.00 a.m. and 4.00 p.m. to 7.00 p.m.

It should be noted that there was a parking accumulation on-site from the previous night's custom at the time of these traffic generation surveys. The following points can be gained from analysis of the survey results:-

- the exiting traffic exceeds the arrivals in the morning with the exception of the Hotel Grand Chancellor which had major function on at the time of the survey; and
- peak afternoon arrivals occur between 5.00 p.m. and 7.00 p.m. with peak on-site parking accumulations occurring during this time interval.

Traffic Impact assessments for the hotels listed in the following table have highlighted the following emerging characteristics:-

- Most of the week day bed customer trade is corporate and there is a low car usage and it has been estimated that around 40% of the weekday custom use cars;
- December and July are the two months of lowest customer activity with the remaining months producing increased corporate customer activity, September to November convention customer activity and February to April is the peak tourism customer activity period;
- most hotels have function room facilities included with their operation and most users of these facilities are taxi based or travel in cars with higher than average occupancy levels;
- all of the hotels have a connection with the Airport bus service; and
- coach tours form an important part of the hotel customer trade.

The above points tend to suggest that, whilst existing parking provisions are adequate, there is a case for performance based assessment of hotel parking supply and traffic generation provisions.

Location	Date	Time of Day	Number of Cars		
			In	Out	Accumulation
Hobart Vista Bathurst Street (Main Car park)	Monday 7 <sup>th</sup> June 1999	9-10	8	12	-4
		10-11	9	4	+5
		4-5	16	13	+3
		5-6	18	18	0
		6-7	14	13	+1
Hobart Vista Bathurst Street (Front Door)	Monday 7 <sup>th</sup> June 1999	9-10	3	5	-2
		10-11	8	7	+1
		4-5	2	2	0
		5-6	9	8	+1

		6-7	8	7	+1
Hotel Grand Chancellor* (Davey Street)	Thursday	9-10	60	55	+5
	10 <sup>th</sup> June 1999	10-11	19	33	-14
		4-5	42	32	+10
		5-6	35	37	-2
		6-7	47	64	-17
Rydges (Argyle Street)	Thursday	9-10	17	22	-5
	10 <sup>th</sup> June 1999	10-11	10	16	-6
		4-5	12	14	-2
		5-6	17	16	+1
		6-7	22	11	+11
The Old Wool Store (Macquarie Street)	Thursday	9-10			
	10 <sup>th</sup> June 1999	10-11			
		4-5			
		5-6			
		6-7			

James Douglas and Associates conducted parking accumulation surveys for Rydges Hotel over 16 days during July 1995 and concluded that the maximum parking occupancy of 56% occurred at noon on 10 July when 32 rooms were sold and a function accommodating 52 persons was conducted. Approximately 37 of the existing car spaces were vacant at this time. If these figures are extrapolated to account for 100% occupancy and a function attended by 104 persons (the maximum recorded was 80) then parking generated would have approximated 93 spaces which is less than Schedule E requirements.

- MEDICAL CENTRES

These surveys assessed the traffic generation, parking accumulation rates and possible share between off street and on street car parking for specialist medical centres. The two centres which were selected for the Warneford Street Day Surgery and the Wentworth Street Eye Clinic. Two attempts were made to survey the Warneford Street Day Surgery however the surveys were abandoned due to the low levels of activity. Therefore the survey results and observations which are presented in this section refer solely to the Eye Clinic.

**South Hobart Eye Clinic**

Survey - Thursday 3<sup>rd</sup> June 1999

**Note:-** The off street car park contains 14 reserved medical and 29 staff / patient car parking spaces

Time of Day	Cars Parked on Street			Cars in Car Park *			Taxi
	Parked	Av. Stay	Max. Stay	Parked	Av. Stay	Max. Stay	
8-9	6	63	150	4	101	120	3
9-10	6	122	135	3	77	85	4
10-11	5	69	100	5	74	160	2
11-12	6	75	115	2	25	25	3
12-1	9	31	140	0	0	0	3
1-2	6	84	105	5	71	140	0
2-3	7	32	100	3	80	85	0
3-4	5	64	98	2	48	70	0
4-5	1	10	90	2	8	90	1

\***Note** - On average 20 staff cars were parked in the car park throughout the survey period

The traffic generation and parking location data supports the observation that:-

- on street parking which is more conveniently located than off street is preferred by patients;
- the majority of the patient stay involves one hour or more;
- there is a steady turn over of an average of 7 cars per hour throughout the day;
- most patient either drive or are driven by private car;
- the busiest activity period is between noon and 1.00 p.m. ; and
- at no time during the survey was the off street patient parking full during the survey period.

The traffic generation and parking location data is similar the observation from the survey Doctor's Surgery and Pharmacy in that on street parking which is more conveniently located than the off street will be the first choice preference of customers. The off street car park which is associated with this Centre is located within the St Johns Hospital grounds. Medical staff parking is provided in designated areas which is the most conveniently located for access to the Clinic, all of the other car park spaces and ample visitor parking is provided. Despite the availability of off - street patient/visitor parking there is a strong demand for patient visitors to park on Wentworth Street as evidenced by the survey results.

The survey results suggest that the schedule E requirements should be retained and that performance based assessments should be undertaken for these types of centres, by type and location, with particular attention given to the location of patient parking and car park location and circulation patterns.

- RESIDENTIAL DWELLINGS

These surveys tested the generally accepted daily traffic generation rates for residential dwellings (of 10 trips per residents and 4 trips per unit). In order to gain an average rate of usage for a large sample, whole precincts rather than individual uses were surveyed.

Residential precincts which had only one or at most two roads servicing the precinct were selected for traffic counter ground count surveys. The Hobart City Council staff placed traffic counters on approach roads to these precincts and the results of the ground surveys have been collated and are presented in the following table which lists both the location and housing density.

**Measured Traffic Generation Rates**

Suburb	Counter Station	Number of Dwellings		Counted Traffic Volumes		
		Houses	Units	Daily	A.M. Peak	P.M. Peak
Sandy Bay	Niree Heights	109	9	938	100	108
Dynnyrne	Dynnyrne Rd	85	24	693	68	62
South Hobart	Grayling Avenue	44	2	387	28	21
Lenah Valley	Athleen Avenue and Ruth Drive	292	11	302	80	63
				1492	138	148

The tabulated traffic generation figures suggest that the commonly accepted trip generation rates for residential dwellings of 10 car trips per day and units of 4 trips per day are too high. A range of trip generation rates were tested against the traffic volume data and the figure of 8 car trips per residential dwelling and 3 per unit and a peak hourly conversion factor of 9% were found to be the best fit. The results of this test are presented in the following table for comparison.

**Assessed Traffic Generation Rates**

Suburb	Counter Station	Number of Dwellings		Assessed Traffic Volumes		
		Houses	Units	Daily	A.M. Peak	P.M. Peak
Sandy Bay	Niree Heights	109	9	899	81	81
Dynnyrne	Dynnyrne Rd	85	24	752	68	68
South Hobart	Grayling Avenue	44	2	352	31	31
Lenah Valley	Athleen Avenue and Ruth Drive	292	11	2369	21	21

It can be concluded from this survey that the present traffic generation rates for residential dwellings is high and that the tested lesser rates, or even less depending on location should be applied.

- **SPORTS GROUNDS**

The study brief specified that an evaluation be undertaken of the impacts of sports grounds and sampling surveys were undertaken in compliance with this requirement. The objective of these surveys was to sample the typical parking accumulation impacts of the various winter sporting activities which occur on Saturdays at the most used sports grounds within the City of Hobart.

The survey process involved random sampling of the peak Saturday parking accumulation of representative sporting activities through out the City of Hobart. The peak periods involved those times of most car parking generation and for other than for the North Hobart Football Ground the peak survey periods involved morning school sport activity. The surveys were conducted over two consecutive Saturdays (15<sup>th</sup> and 22<sup>nd</sup> May 1999) and the survey results were averaged.

The selected sporting activities together with their participant numbers are tabulated as follows:-

Sport	Location	Number of Playing Fields	Parking Accumulation	
			On Street	Off Street
Australian Rules Football	North Hobart Football Ground	one	69	20
	Hutchins Oval Sandy Bay	one	12	241
Net Ball	Creek Road Net Ball Centre	eight courts	92	97*
Hockey	Hockey Centre	five with four in use at time of the survey	69	155
	Bayside, Cornelian Bay	two	40	26
Rugby	Rugby Park, New Town	two	6	104
Soccer	South Hobart	one	86	no provision for

---

				spectators
--	--	--	--	------------

**\*Note:-** Vacant land, which is owned by the Glenorchy City Council, on the northern side of Creek road is unofficially used for off street parking and parking in this area was surveyed as off street parking . The loss of this land will impose a greater impact on the street kerbside parking demands.

It should be noted that when on street parking is conveniently located and more readily accessible than the off street parking then the on street parking spaces becomes the first choice. The off street parking supply was full at all surveyed sporting events and the capacity of this supply often exceeded the marked space capacity due to irregular parking patterns. Car occupancy levels varied between the school based and adult based sporting activities with typical average levels of 4 persons per car for the school based and for 2 for the adult based sporting activities.

It should be noted that the attendance levels at the various surveyed sports will vary according to whether the game is a less important level roster to an end of season final. The of street parking, which was available, tended to meet the roster game requirement with in most cases minimum impact on the street parking.

When estimating the amount of traffic generated and parked for the end of season finals then consideration will need to be given to estimated crowd size, estimated vehicle occupancies and available transport modes. The size of crowd which is attracted to each event is limited by site attendance capacity. Car occupancy levels vary to the type and popularity of the event staged and as general rule the number who choose to travel by car is higher for small crowds and events which finish late at night.

For the typical end of season events peak traffic congestion occurs at the end of the event and drivers often park in remote locations before the event to ensure a quick exit later. The local area amenity impacts of these events can be wider spread than what would be normally expected.

#### ***4.5 Survey of Parking Generation at Suburban Shopping Centres***

Attitudinal and behavioural surveys were conducted for the whole of the suburban shopping centre precincts and the results of these surveys are contained in section 4.6 "Survey of Shopping Patterns at Suburban Shopping Centres".

The objective of these specific traffic enumeration field studies was to assess the traffic and parking generation characteristics of a cross section of typical suburban strip shopping centres.

Shopping centres at Sandy Bay Road - Lower Sandy Bay, Macquarie Street - South Hobart and Augusta Road - Lenah Valley were selected for survey. The surveys consisted of dividing the street frontage shopping into a manageable survey length (based on shop frontage and length of kerbside parking) and then recording by time interval the number of pedestrians entering the cordon area, number of car arrivals, length of stay and number of shopping trips per car which occurred on the frontage.

The land uses within each cordon survey area are listed in the following tables. It should be noted that the listed land uses are within the survey cordon and are less than the shopping centre total land uses. This restriction was necessitated by the difficulty the field officers had in monitoring the shopping trip of each car occupant. The restriction on survey was therefore placed in the interests of survey detail accuracy.

### South Hobart

(10 - space kerbside parking length)

BUSINESS	ADDRESS	FLOOR AREA (Square metres)	SCHEDULE - E Space Requirement
South. Hobart. Post office	353 Macquarie Street	453	
Secret Garden Florist	358 Macquarie Street	153	
South. Hobart. Newsagency	358a Macquarie Street	325	
South Hobart Pharmacy	360 Macquarie Street	176	
Salad Bowl	362 Macquarie Street	400	

### Lower Sandy Bay

(12 - space kerbside parking length)

BUSINESS	ADDRESS	FLOOR AREA (Square metres)	SCHEDULE - E Space Requirement
Silvio's Hairdresser	626 Sandy Bay Road	595	
Bayside Meats	628 Sandy Bay Road	595	
R W Browne Pharmacy	630 Sandy Bay Road	595	
Beach Newsagency	632 Sandy Bay Road	595	
Ming Court Restaurant	636a Sandy Bay Road		
The Promenade Hairdresser	638 Sandy Bay Road	98	



The Bread Box	640 Sandy Bay Road	98	
---------------	--------------------	----	--

**Lenah Valley**

(14 - space kerbside parking length)

BUSINESS	ADDRESS	FLOOR AREA (Square metres)	SCHEDULE - E Space Requirement
Valley Floral Boutique	92 Augusta Road	264	
L.V. Newsagency	98 Augusta Road	279	
The Bread Cafe	98 Augusta Road	279	
L. V. Fish Supply	100a Augusta Road	214	
L. V. Pizza	102 Augusta Road	214	
Valley Health Foods	104 Augusta Road	214	
Amcal Pharmacy	106 Augusta Road	129	
TAB	110 Augusta Road	264	

The results of the survey have been collated and are tabulated in the following data summations:-

**Lower Sandy Bay**

**Tuesday - 2<sup>nd</sup> June 1999**

Time period	Single Trips		Two Trips		Three Trips		Delivery Trips		Number Pedestrians
	Number	Average Stay	Number	Average Stay	Number	Average Stay	Number	Average Stay	
8 - 9	30	5	3	14	1	60	2	47	11
9 - 10	15	10	3	8	3	18	1	15	25
10 - 11	20	9	9	10	0	NA	4	8	9
11 - 12	32	5	4	12	0	NA	1	5	29
12 - 13	37	5	2	4	0	NA	0	NA	16
13 - 14	36	6	5	10	1	17	2	6	12
14 - 15	51	6	4	11	1	21	1	3	3
15 - 16	45	6	4	5	1	5	1	6	7
16 - 17	37	5	4	9	1	14	0	NA	7
17 - 18	39	6	4	13	1	16	0	NA	4
18 - 19	35	5	6	5	0	NA	0	NA	1

**Lower Sandy Bay**

**Friday - 4<sup>th</sup> June 1999**

Time period	Single Trips		Two Trips		Three Trips		Delivery Trips		Number Pedestrians
	Number	Av. Stay	Number	Av. Stay	Number	Av. Stay	Number	Av. Stay	
8-9	39	4	6	7	1	33	5	11	10
9-10	45	6	8	19	0	NA	2	10	12
10-11	33	7	4	6	0	NA	5	8	9
11-12	45	7	1	12	1	43	4	3	0
12-13	41	14*	2	27	0	NA	1	2	7
13-14	45	4	5	16	0	NA	1	6	1
14-15	36	6	6	13	0	NA	1	5	1
15-16	40	7	5	17	0	NA	1	12	2
16-17	44	8	1	20	0	NA	1	2	3
17-18	39	5	7	11	1	17	0	NA	1

\* Figure distorted by two visits to the hairdresser which averaged 143 minutes each

**South Hobart**

**Wednesday 16<sup>th</sup> June 1999**

Time period	Single Trips		Two Trips		Three Trips		Delivery Trips		Number Pedestrians
	Number	Av. Stay	Number	Av. Stay	Number	Av. Stay	Number	Av. Stay	
8-9	34	2	0	NA	0	NA	2	11	7
9-10	44	5	7	2	0	NA	3	6	14
10-11	57	5	1	12	0	NA	1	4	16
11-12	44	8	1	8	0	NA	1	38	
12-13	42	7	6	13	0	NA	0	NA	14
13-14	47	5	9	8	0	NA	1	4	5
14-15	33	8	10	11	0	NA	2	4	13
15-16	47	5	13	8	0	NA	1	2	10
16-17	33	8	30	8	0	NA	1	2	9
17-18*	10	5	18	6	0	NA	0	NA	4

\*Survey aborted after 17:30 hours due to poor light conditions

**Lenah Valley**

**Wednesday - 9<sup>th</sup> June 1999**

Time period	Single Trips		Two Trips		Three Trips		Delivery Trips		Number Pedestrians
	Number	Av. Stay	Number	Av. Stay	Number	Av. Stay	Number	Av. Stay	
8- 9	29	3	0	NA	1	7	0	NA	12
9-10	49	4	3	5	0	NA	1	3	6
10-11	46	8	3	23	0	NA	2	10	0
11-12	43	7	4	12	0	NA	2	6	2
12-13	51	7	2	8	0	NA	1	3	0
13-14	35	8	5	8	0	NA	1	3	1
14-15	58	6	3	40	0	NA	2	3	4
15-16	39	15	4	7	0	NA	0	NA	0
16-17	40	5	3	5	0	NA	0	NA	0
17-18	43	4	5	9	0	NA	0	NA	0

The following key points have been concluded from the survey data;-

- the majority of the shopping centre trip generation is single shopping trip based;
- the length of single shopping trips ranges, on average, between 4 and 8 minutes;
- in the majority of cases there are fewer than three shopping trips per car parking event;
- the trip generation rates for the three surveyed shopping centres are relatively consistent through out the day;
- news agencies generate the majority of the morning (8.00 a.m. to 9.00 a.m. ) trip generation;
- hair dressing salons generate the longest parking stay duration and figures in excess of 140 minutes per stay can be anticipated;
- car occupancy levels typically varied between 1 and 2 through out the survey period;
- the take away business such as Pizza did not generate any significant traffic activity during the survey period and there traffic generation was noted to occur outside of the main shopping centre business activity; and
- the florist were observed to generate their main business in the afternoon.

It can be concluded from the surveys of suburban shopping centres that the available parking time restrictions and supply of kerbside parking is matched to and satisfactorily meets the profile of the customer parking demands. The exception to this conclusion would be the hairdresser customers whose service time invariably exceeds the posted time restriction.

The surveyed shopping centre traffic and parking activity is an example of shared parking demand. For example whilst not a lot of multiple trips were observed to occur from each parking event there was a significant distribution of trips between the quick service businesses such as the Newsagent and Chemist. The Newsagent was, in most cases the prime (often referred to as the anchor) quick turn over traffic generator with the other businesses feeding from the Newsagent generated parking demand.

The surveys of suburban shopping centres provide operational examples of shared parking, albeit that all of the parking supply was on street. Shared parking is defined as parking space that can be used to serve two or more individual land uses without conflict or encroachment.

The opportunity to implement shared parking is the result of two conditions:-

- Variations in the peak accumulation of parked vehicles as the result of different activity patterns of adjacent land uses (by hour of day, by season); and
- Relationships among the land use activities that result in people's attraction to two or more land uses on a single car trip to a given area or development.

Shared parking is not a new phenomenon and has long been observed in central business districts, suburban shopping centres and other areas where land uses are combined.

Most planning schemes use peak parking generation rates for defined land uses however when combined for multiple land uses these do not reflect the total peak parking demand which is often significantly less than the sum of the individual demands. As a consequence the parking demand can be over stated.

The Suburban Shopping Centres which were surveyed as part of this study demonstrate some of the attributes of shared parking albeit that there a maximum of three shared parking trips for any parking event and these trips are generated from the public kerbside parking spaces.. The following table illustrates a theoretical but never the less classic example of the shared space principle for a Supermarket and typical; 9.00 a.m. to 5.00 p.m. weekday office block operation.

Specification	Land Use Type		Total
	Supermarket	Office	
Floor Area (square metre)	3,000	1,600	
Scheme Parking Spaces / square metre	15	80	
Number of spaces	200	200	400
<b>Shared Parking Weekdays:-</b>			
• % of peak accumulation*	97%	75%	
• Revised no. car parking spaces	194	150	354
• Car Park Space Saving	6	50	<b>46</b>
• % Car Park Space Saving*			<b>11.5%</b>
<b>Shared Parking Saturdays:-</b>			
• % of peak accumulation*	100%	100%	
• Revised no. car parking spaces	20	200	220
• Car Park Space Saving	180	0	<b>180</b>
• % Car Park Space Saving*			<b>45%</b>

**EXAMPLE OF A SHARED PARKING CALCULATION**

(Extracted from Transport and Land Development - Institute of Transport Engineers)

\*The accurate estimation of the “% of peak accumulation” is pivotal to the success of assessing shared parking demand. The development of a cost effective data base to assist with this process is expensive and may not be cost effective for the City of Hobart.

Estimates of parking demand should take place during planning and design to better use both the available and planned parking infrastructure.

The following table provides details of a widely researched American parking accumulation data which may be of assistance for the preliminary assessment of shared parking options. All preliminary assessments should be followed up with a more detailed assessment which is run along the following lines recommended in the following stepped process:-

Step 1 - Initial Project Review - the analysis of shared parking deals with more detailed issues and relationships than tradition analyses of parking demands and it is therefore necessary to describe both the physical and anticipated relationships between land uses.

Step 2 - Adjustment for Peak Factor -this involves the verification of land use and selection of parking parameters, selection of parking factors, adjustment for season and adjustment for captive market.

Step 3 - Analysis of Hourly Parking Accumulation - this step produces an estimate of hourly parking accumulations for each land use during a typical weekday and week end day if appropriate. The outcome from of this step should be an estimate of parking demand for every land use by hour of day.

Step 4 - Estimation of Shared Parking Demand - the hourly parking demand is merged to estimate the overall shared parking demands for the project. Depending on the project this may involve weekday and Saturday assessments.

(Extracted from ULI study by Barton- Aschman Associates)

Time of Day	Office	Retail	Restaurant	Cinema	Hotel Accommodation	Function Rooms	Convention Centre
6.00 a.m.	3%	-	-	-	100%	-	-
07.00	20	8%	2%	-	85	-	-
08.00	63	18	5	-	65	50%	50%
09.00	93	42	10	-	55	100	100
10.00	100	68	20	-	45	100	100
11.00	100	87	30	-	35	100	100
Noon	90	97	50	30%	30	100	100
1.00 p.m.	90	100	70	70	30	100	100
2.00	97	97	60	70	35	100	100
3.00	93	95	60	70	35	100	100
4.00	77	87	50	70	45	100	100
5.00	47	79	70	80	60	100	100
6.00	23	82	90	90	70	100	100
7.00	7	89	100	100	75	100	100
8.00	7	87	100	100	90	100	100
9.00	3	61	100	100	95	100	100
10.00	3	32	90	100	100	50	50
11.00	-	13	70	80	100	-	-
Mid night	-	-	50	70	100	-	-

**REPRESENTATIVE HOURLY PARKING ACCUMULATION BY PERCENTAGE OF PEAK HOUR**

(Extracted from ULI Study by Barton- Aschman Associates)

The fundament characteristic of shared parking facilities is that they are more efficient. Each space can be used more hours during the day, week, or month. This higher level of use is achieved through the combination of increased turnover and use of the space during more hours of the day. The former reason is the result of different types of parkers using the facility

during the day - eg. office workers and then hotel guests. The latter reason may be the result of a captive market however it would be expected that higher turn over is the primary cause of the increased use.

It is possible to anticipate that the shared parking facility will be occupied for more periods of the day and to achieve this the facility will need the following attributes:-

- each parking space should be useable by any vehicle parking;
- the facility will have significant inbound and outbound traffic flows at more periods of the day and therefore the car park circulation system must be easy to use and understood;
- if the car parking facility will operate for longer periods, even 24 hours per day, safe day and night operation must be designed for;
- because of the mixed and multiple land uses the facility will need effective direction and information signage and traffic control;
- the placement and enforcement of time limited parking restrictions may be required as the efficacy of the shared parking operation is sensitive to illegal use;
- a strategy for the use of the shared parking facility needs to developed to guide parkers to the optimum spaces. This strategy needs to consider:-
  - achieving maximum separation for those parkers competing for space - eg. shoppers and cinema patrons;
  - minimising the walking distance to those land uses serving captive markets; and
  - achieving minimum separation of those workers not competing for space.

A stepped process for the shared parking assessment has been developed. However, depending on the type of project the cost effective and accurate evaluation of the % parking accumulation for shared parking evaluations may be difficult to achieve and care needs to be taken before committing resources to any detailed analysis. Guidelines have also been prepared for the management of shared parking areas.

#### • SUPERMARKETS

The objective of these surveys was to assess the traffic and parking generation characteristics of a cross section of typical stand alone supermarket operations. Where stand alone means suburban Supermarket activities which do not have other on site located business activities, such as news agencies, which are often associated with suburban Shopping Centre operations.

The Coles Supermarket at Sandy Bay Road, Sandy Bay, Purity Supermarket at Main Road New Town and Jim's Oasis, Davey Street were selected for survey on the basis that not only were

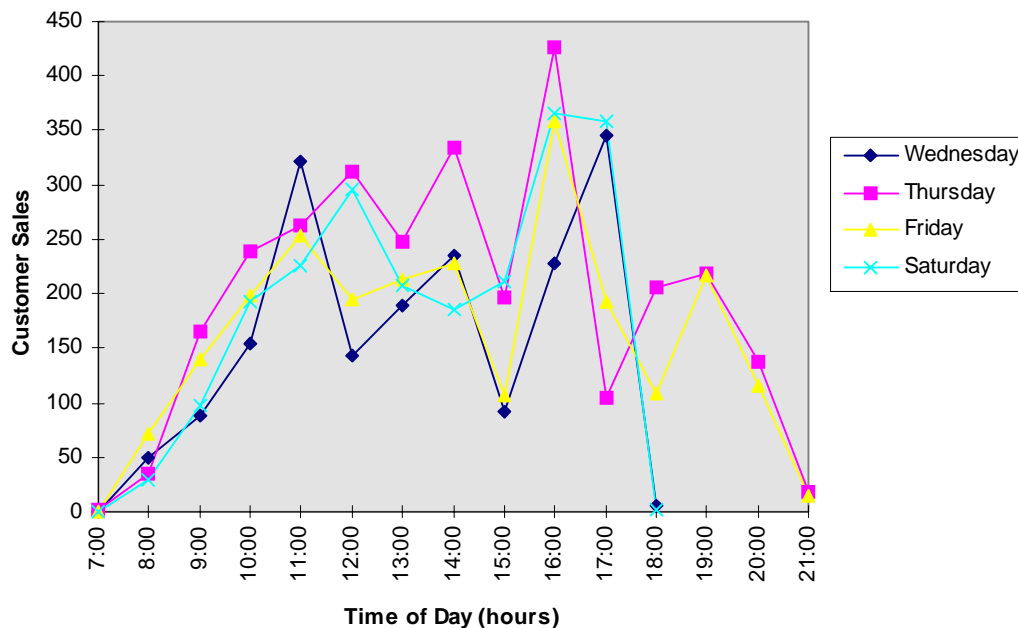
they site specific Supermarkets but also because their car park layouts and access arrangements were suited to cordon type survey. It should be noted that the Jim’s Oasis Supermarket was included to compare the smaller “seven day a week trading” operation with the larger chain Supermarkets.

The floor areas, Hobart Planning Scheme Schedule E and the RTA Guide to Traffic Generating Developments parking requirements for each of the nominated Supermarket sites are tabulated in the following table:-

Supermarket	Floor Area (square metres)	Parking Requirement	
		HCC Schedule E	RTA Guide
Coles - Sandy Bay	2102	1401	128
Purity - New Town	5320	355	325

**Comparison of Parking Requirements**

The following figure depicts the temporal distribution of customer sales for a typical Tasmanian suburban large chain Supermarket operation.



**Typical Sales Activity for Suburban Supermarkets**

(Extract from Purity Supermarket Customer Sales Data)

The graphs have been interpolated from Purity customer sales numbers and It is important to note that the shapes of the daily distributions are relevant to this discussion rather than the



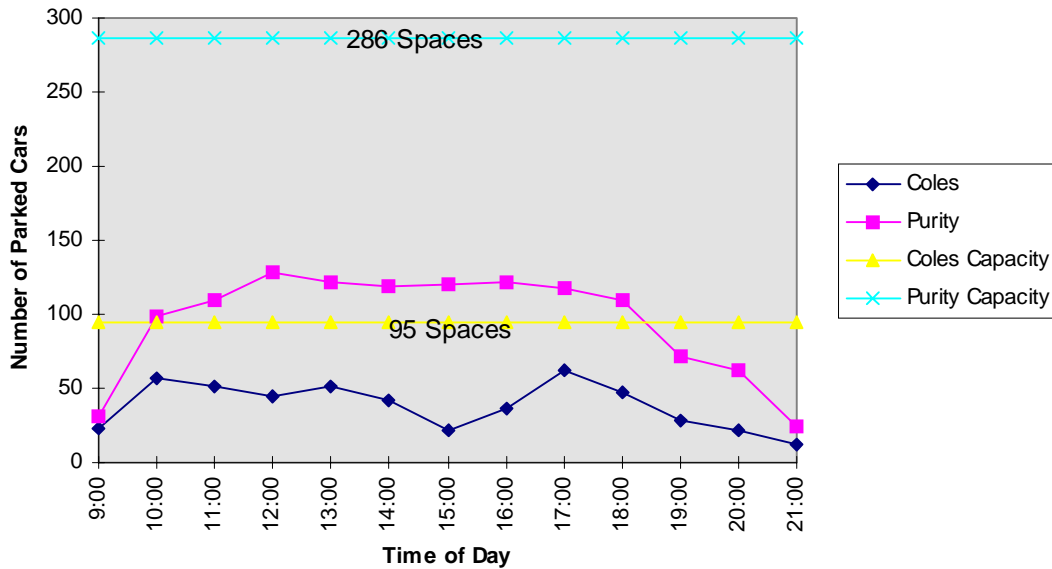
number of sales as the sales vary by location however the time of day peaks and troughs are relatively constant by suburb.

Spot traffic generation surveys were conducted for the peak weekday activity days during the time periods of 1.00 p.m. to 3.00 p.m. and weekend of 11.00 a.m. to 1.00 p.m. these figures could be extrapolated to the peaks by using the temporal sales distribution graphs if required. The results of the surveys have been collated and summarised in the following table:-

Location	Day	Time of Day	Number of cars		Parking Accumulation
			In	Out	
Coles	Friday	1.p.m. - 2.p.m.	110	118	-8
Sandy Bay	4 <sup>th</sup> June 1999	2.p.m.- 3.p.m.	135	125	+10
	Saturday	11a.m.-noon	175	131	+44
Purity	Thursday	1.p.m. - 2.p.m.	129	148	-19
		2.p.m.- 3.p.m.	151	135	+16
New Town	10 <sup>th</sup> June 1999	11a.m.-noon	140	142	-2
	Saturday	noon-1 p.m.	162	145	+17
Jim's Oasis	Thursday	1.p.m. - 2.p.m.	23	26	-3
		2.p.m.- 3.p.m.	29	30	-1
Davey Street	3 <sup>rd</sup> June 1999	11a.m.-noon	53	57	-4
	Sunday	noon-1 p.m.	68	59	+9

The data from the table highlights a fairly similar traffic generation rate for the Coles and Purity Supermarket Table.

Typical parking accumulation data for the Coles and Purity Supermarkets has been extracted from parking accumulation surveys which were undertaken on the Friday 21<sup>st</sup> October 1994 for the Coles Supermarket and Friday 5<sup>th</sup> September 1997 for the Purity Supermarket. This data together with each Supermarket's car park capacity has been plotted on the following graphs.



**Temporal Distribution of Supermarket Car Parking Accumulations**

Whilst it is acknowledged that the Purity and Coles car parks are in different locations and have different car park circulation characteristics it can be noted from the graphs that there is ample spare car parking capacity even at peak times. This suggests that, depending on the supermarket size, layout and location, there is room to discount the Schedule E parking space requirement for Supermarkets. In addition the RTA use of gross leasable floor area and the development of local peak traffic generation rate criteria are worthy of adoption.

Despite the survey data being constrained to a non statistical sample size it is recommended that the RTA criteria for assessing the parking and traffic generation rate for Supermarkets be adopted in place of the existing Planning Scheme schedule E.

#### 4.4.4 Conclusions

The field surveys have demonstrated that the RTA Guide To Traffic Generating Developments criteria is, in most cases, superior to the Hobart City Council Planning Scheme’s Schedule E . The surveys also suggest that the RTA Guide data traffic and parking generation characteristics may be higher than that which could be expected for Hobart. However in the absence of more rigorous field testing it is recommended that the RTA figures be adopted where appropriate.

This section contains a range of useful operational data which has been listed from past traffic impact assessments undertaken for developments around the City of Hobart. The importance

and, hopefully, usefulness of this information supports the need for the introduction of a data base for recording, updating and referencing this important local data base.

## 4.5 Survey of Shopping Patterns at Suburban Shopping Centres

### 4.5.1 Survey Objectives

The Survey was undertaken by 'Myriad Consultancy - market research analyst's, to measure the level of parking demand and related shopping patterns at each of three suburban shopping strips – Lenah Valley (Augusta Rd), Lower Sandy Bay and South Hobart (Macquarie St).

### 4.5.2 Methodology

The fieldwork comprised intercept surveys with a cross section of shoppers at each center. Interviews were conducted between June 17 and June 23 1999, with interviewing at various times of the day and days of the week to ensure a valid sample.

Qualified respondents were regular visitors to the centers (at least once a week), being shoppers or others, but not including people working in the area.

The survey instrument was a structured questionnaire (and showcards) developed in consultation with the Project Management Team – refer to *Appendices A and B*.

The survey sample of 416 respondents was distributed as follows:-

Lenah Valley	138
Sandy Bay	139
South Hobart	139
<b>Total sample</b>	<b>416*</b>

\* Sampling error plus or minus 5% or less at the 95% confidence level.

All fieldwork was conducted in accordance with relevant IQCA (Interviewer Quality Control Australia) standards and guidelines.

### 4.5.3 Research Findings - All Centres

Results have been collated with the relevant question – refer to survey questionnaire–*Appendix A*.

#### 1. How often do you come to this shopping area?

	Freq.	%	LV	SB	SH
every day	162	38.9	38.4	30.2	48.2
several times a week	179	43.0	47.8	42.4	38.8
at least once a week	75	18.0	13.8	27.3	12.9
	416	100.0	100.0	99.9	99.9

Shopper visitation is most likely to be on a daily basis (particularly South Hobart) or several times a week (particularly Lenah Valley). There is also a significant representation of Sandy Bay shoppers visiting their center at least once a week.

#### 2. What was your main reason for coming here today?

	Freq.	%	LV	SB	SH
to shop	332	77.9	76.1	83.7	73.6
appointment	17	4.0	3.5	7.8	0.7
to eat	14	3.3	4.2	5.0	0.7
Post Office	36	8.5	5.6	0.0	19.4
other	27	6.3	10.6	3.5	5.5
	426	100.0	100.0	100.0	99.9

\* multiple responses

People visit their center primarily to shop, most likely for the Sandy Bay center.

The Post Office was also an important reason for almost 1 in 5 South Hobart shoppers.

#### 3a. How did you travel here today?

	Freq.	%	LV	SB	SH
by car/other motor vehicle (driver)	302	72.6	76.1	77.7	64.0
by car/other motor vehicle (passenger)	14	3.4	3.6	3.6	2.9
by bus	0	0.0	0.0	0.0	0.0
by taxi	1	0.2	0.0	0.7	0.0
cycled	4	1.0	0.7	0.0	2.2
walked	94	22.6	19.6	17.3	30.9
other	1	0.2	0.0	0.7	0.0
	416	100.0	100.0	100.0	100.0

**3b. And how do you normally travel here?**

	Freq.	%	LV	SB	SH
by car/other motor vehicle (driver)	318	75.9	79.1	80.1	67.9
by car/other motor vehicle (passenger)	8	1.9	0.7	2.8	2.1
by bus	1	0.2	0.7	0.0	0.0
by taxi	1	0.2	0.0	0.7	0.0
cycled	2	0.5	0.7	0.0	0.7
walked	88	21.0	18.0	15.6	29.3
other	1	0.2	0.0	0.7	0.0
	419	100.0	99.2	99.9	100.0

\* multiple responses

Overall, 3 out of 4 people travel to their center by car (as a driver), with a significant proportion also walking to each center, particularly in South Hobart (almost 3 in 10 shoppers).

**4. Which shops/businesses will you be visiting today?**

	Freq.	%	LV	SB	SH
pharmacy	70	10.0	14.3	6.3	9.0
newsagent*	208	29.6	45.6	22.6	22.0
corner store	166	23.6	9.6	33.5	27.4
bakery	96	13.7	18.7	13.1	9.4
butcher	25	3.6	0.0	5.4	5.1
automotive	10	1.4	3.0	0.9	0.4
restaurant/café	10	1.4	0.0	4.5	0.0
hairdresser	9	1.3	0.0	3.2	0.8
health care	16	2.3	3.0	4.1	0.0
TAB	11	1.6	4.8	0.0	0.0
ATM	0	0.0	0.0	0.0	0.0
takeaway	14	2.0	0.9	4.5	0.8
Post Office	54	7.7	0.0	0.0	21.2
other	14	2.0	0.0	1.8	3.9
	703	100.0	99.9	99.9	100.0

\* includes Post Office (for LV and SB)

The newsagent and corner store were the main attractors overall ... in Lenah Valley nearly half of all shoppers. The corner store was the strongest attractor in Sandy Bay and South Hobart, with the South Hobart Post Office and the Lenah Valley bakery also significant.

**Total shops visited**

Total	Freq.	%	LV	SB	SH
1	203	48.8	52.2	53.2	41.0
2	150	36.1	31.9	38.1	38.1
3	51	12.3	13.0	6.5	17.3
4	11	2.6	2.9	1.4	3.6
5	0	0.0	0.0	0.0	0.0
6	1	0.2	0.0	0.7	0.0
	416	100.0	100.0	99.9	100.0

Average number of shops visited:- 1.7 (total) 1.7 (LV); 1.6 (SB); 1.8 (SH)

Most people visited either one or two shops in total ... 85% of all respondents. The overall average was closer to 2 shops visited, highest for South Hobart and lowest for Sandy Bay.

**4a. Can you show me on this map where you parked?**

*(refer individual centers maps for detail in Technical Addendum)*

**4b. And was that where you wanted to park?**

	Freq.	%	LV	SB	SH
Yes	269	84.6	77.1	87.1	90.3
No	49	15.4	22.9	12.9	9.6
	318	100.0	100.0	100.0	100.0

Most people parked where they wanted to park – 85% of all respondents, with South Hobart achieving the highest result and Lenah Valley the lowest.

**Preferred parking space**

*(refer individual centers maps for detail in Technical Addendum)*

**5. How long will you be here today?**

	Freq.	%	LV	SB	SH
up to 15 minutes	332	79.8	84.8	66.9	87.8
up to half an hour	43	10.3	5.8	17.3	7.9
up to an hour	24	5.8	2.2	12.9	2.2
longer	6	1.4	0.0	2.2	2.2
na	11	2.6	7.2	0.7	0.0
	416	100.0	100.0	100.0	100.1

Length of visit at each center was likely to be short term, with 8 in 10 respondents staying for 15 minutes or less. Sandy Bay respondents were most likely to stay longer (30% staying more than 15 minutes and up to an hour).

**6a. Parking spaces available**

Thinking about the parking in this area, how do you rate the following aspects

**(scale – 5 = plenty of spaces, 4 = reasonable, 3 = satisfactory, 2 = sometimes difficult, 1 = always hard to get a park – refer to showcard in the technical Addendum -Appendix B)**

	5	4	3	2	1	No. resp
Freq.	46	155	72	108	29	410

%	11.2	37.8	17.6	26.3	7.1	100
---	------	------	------	------	-----	-----

<b>Average</b>	<b>% rating 4+</b>	<b>% rating 3+</b>
3.2	49.0	66.6

	<b>Average</b>	<b>% 4+</b>	<b>% 3+</b>
Lenah Valley	2.9	40.5	57.4
Sandy Bay	3.1	43.1	63.5
South Hobart	3.6	63.5	78.8

2 out of 3 customers rated the parking spaces available as 'satisfactory' or better, with nearly half rating spaces available as 'reasonable' or better.

In this regard, the most satisfied shoppers were in South Hobart and the least satisfied in Lenah Valley.

#### 6b. Time limits

*(scale – ample time limits, 4 = reasonable, 3 = satisfactory, 2 could be longer, 1 = inadequate, always have to rush – refer to showcard Appendix B)*

	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>No. resp</b>
Freq.	164	136	78	21	6	405
%	40.5	33.6	19.3	5.2	1.5	

<b>Average</b>	<b>% rating 4+</b>	<b>% rating 3+</b>
4.1	74.1	93.3

	<b>Average</b>	<b>% 4+</b>	<b>% 3+</b>
Lenah Valley	4.0	72.4	91.0
Sandy Bay	4.0	74.3	91.9
South Hobart	4.2	75.6	97.1

Time limits received a positive response at all centers, being rated at 'reasonable' or better by 3 in 4 respondents overall, and 'OK/satisfactory' by more than 9 in 10 respondents.

Again South Hobart rated highest of the three centers, and Lenah Valley the lowest.



Center

Area	Freq.	%
Lenah Valley	138	33.2
Sandy Bay	139	33.4
South Hobart	139	33.4
	416	100.0

#### 4.5.4 Conclusions

The objective of this research was to determine the shopping pattern of respondents and their level of satisfaction with the parking supply within each of three suburban shopping strips by conducting a number of intercept surveys with a cross section of shoppers at each center. The surveys were conducted at Lenah Valley, Lower Sandy Bay and South Hobart suburban shopping centers during June 1999, 416 respondents in all, with equal representation from each center.

Shopper visitation at each center was most likely to be on a daily basis or several times a week ... and certainly more frequent than our research findings for the Moonah and Glenorchy shopping centers (*Parking Needs Surveys – Glenorchy and Moonah Commercial Precincts, for Glenorchy City Council (1996)*). Note, however, that the Hobart research excluded shoppers visiting less often than once a week.

Not surprisingly, people mainly visited to shop for their everyday needs – newsagent, corner store, Post Office, bakery, etc. Most people visited either one or two shops, whereas in Moonah and Glenorchy a wider shopping pattern was observed – with around three shops visited on average.

People mainly travelled to their center by car, with a significant proportion walking to the center (higher than for Moonah/Glenorchy).

Shoppers were likely to stay short term (up to 15 minutes) whereas in Glenorchy and Moonah the stay was likely to be much longer.

Most people parked where they wanted to park, particularly in South Hobart, less so in Lenah Valley.

People were generally satisfied with the number of parking spaces available but there were some concerns expressed regarding availability particularly during peak times, and most evident in Lenah Valley and Sandy Bay ... prompting calls for more off street carparking to be provided.

People were generally happy with the applicable time limits ... if in fact they were aware of them. However, there was some call for a time limit extension to 30 minutes mainly from the Lenah Valley respondents.

- Outcomes

The attitude and behavioral surveys affirms that these Suburban shopping Centers function primarily for frequent and regular short term convenience shopping for people traveling by car. Parking availability is satisfying the specific shopper needs for each center to a reasonable extent. However, a review of both spaces available and applicable time limits is indicated.

The attitude and behavioral survey findings compliment the field surveys identified in the preceding section and support the conclusion that the traffic and parking generation and levels of service at these centers is satisfactory.

## 4.6 Demographic Indications of Parking Demand

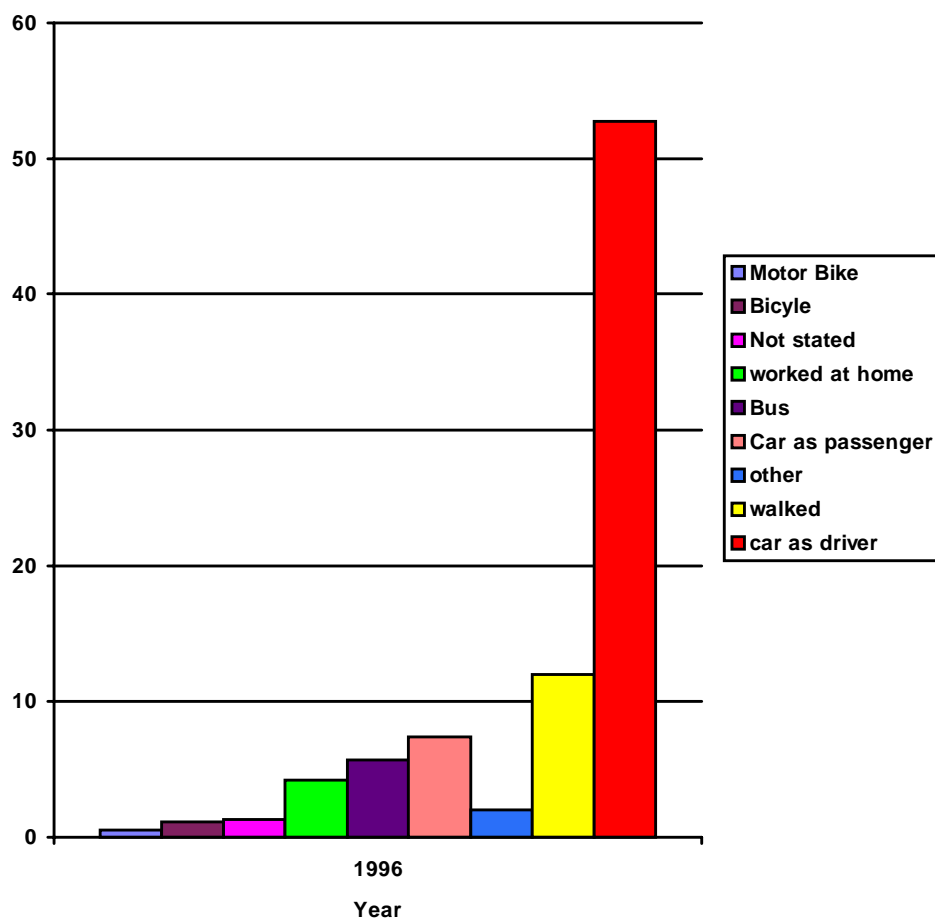
An analysis of demographic data has been undertaken to indicate the degree of private vehicle dependency and the car parking space requirements of dwellings in Hobart. The data is derived from the Australian Bureau of Statistics Census counts.

- Degree of Vehicle Dependency

Table. 5

Percentage

Method of Transport to work by proportion for Hoart Population 1996



The above table shows the journey to work characteristics for the Hobart population based on the 1996 Census count.. Between 1976 and 1996 the journey to work characteristics changed in the following way:-

During this period there was a:-

- 20 % increase in the number of people who drove;
- 50% decline in the number of people travelling by bus;
- 20% decline in people travelling as a passenger in a car; and

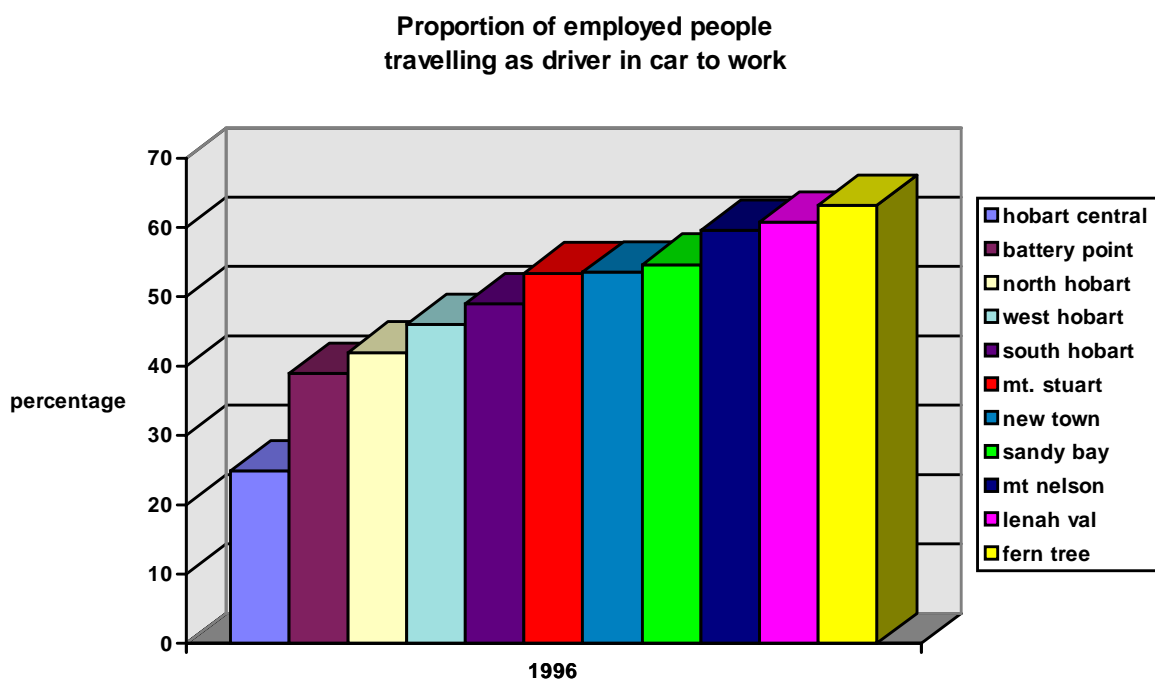
- a decline in the number of people walking to work by approximately 25%.

In summary, there is a clear predominance in the use of the private car to travel to work. Car usage has increased markedly from 1976 to 1996. Approximately 52 % of all respondents indicated that they drove to work. The next most favoured means of transportation was walking, with 12.5% of the employed population travelling to work this way.

The number of persons working from home remains minimal. Although there has been little variation in the figures between census years 1991 and 1996 this may be due to the general economic downturn and the reduced numbers within the workforce. There is no indication that the reliance upon the private car for travelling to work will alter in the foreseeable future.

- **Suburban Variation in the Degree of Vehicle Dependency**

Table 6



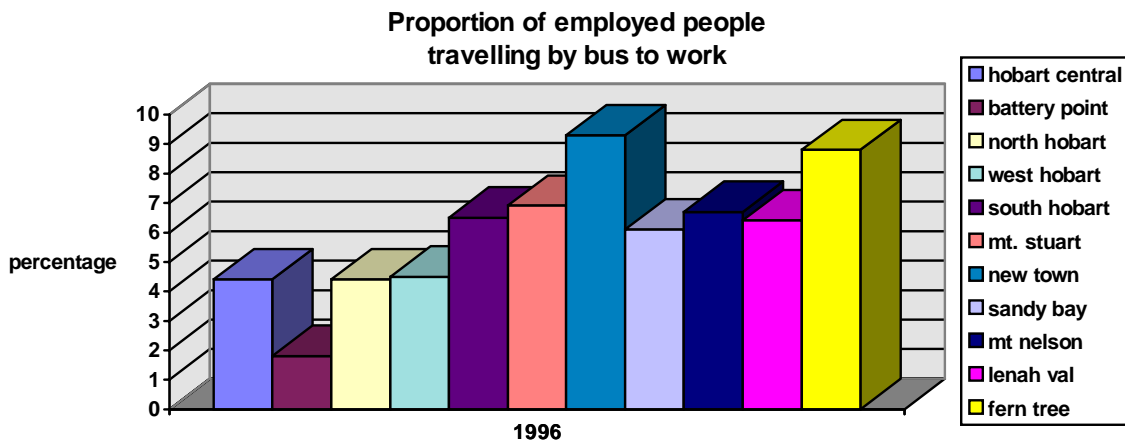
It is clear that the more outlying suburbs have a higher dependency on private cars as their means of travelling to work than inner suburbs.

Six suburbs have higher than the city average for travelling to work by car as the driver. Fern Tree and Lenah Valley with 63.2% and 60.8% respectively have the highest dependency on private car for travel. The other suburbs with above average proportions were Mount Nelson 59.6% , Sandy Bay 54.7% and Mt. Stuart at 53.4%.

Of the inner suburbs which recorded below average car dependency , Hobart Central at 24.9% had the lowest proportion of all suburbs with the others being South Hobart 49%, West Hobart 46%, North Hobart 42% and Battery Point with 39%.

- Public Transport Usage

Table 7



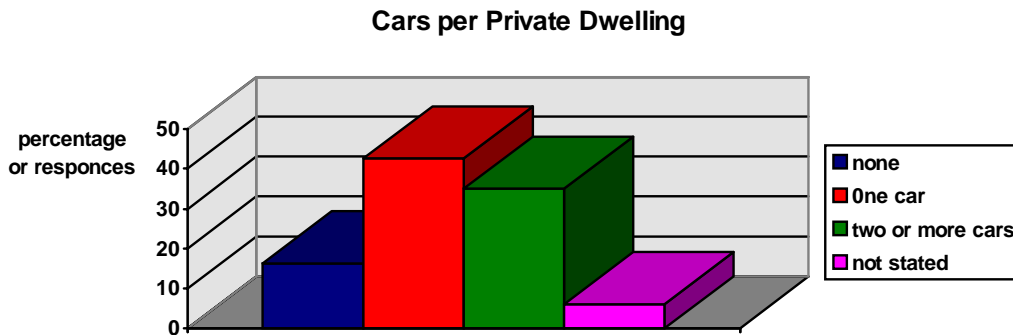
Only approximately 5.7% of employed people used the bus to go to work in 1996 which continued the decline in the reliance on this form of transport. The usage by suburbs tends to indicate that accessibility to bus routes rather than simply the distance from the City centre may be a contributing factor in determining the level of bus usage.

The suburbs with the highest proportions were New Town at 9.3% and Fern Tree at 8.8%. Other suburbs with higher proportions than the Hobart average are Mt. Stuart 6.9%, Mt. Nelson 6.7%, South Hobart 6.5% and Lenah Valley at 6.4%. Suburbs with proportions below the Hobart average were Sandy Bay at 6.1% , West Hobart 4.5%, North Hobart and Hobart Central at 4.4% each and Battery Point at 1.8%.

- Car Availability Per Dwelling

The following data identifies how many vehicles there were for each occupied private dwelling in the Hobart local government area in 1996.

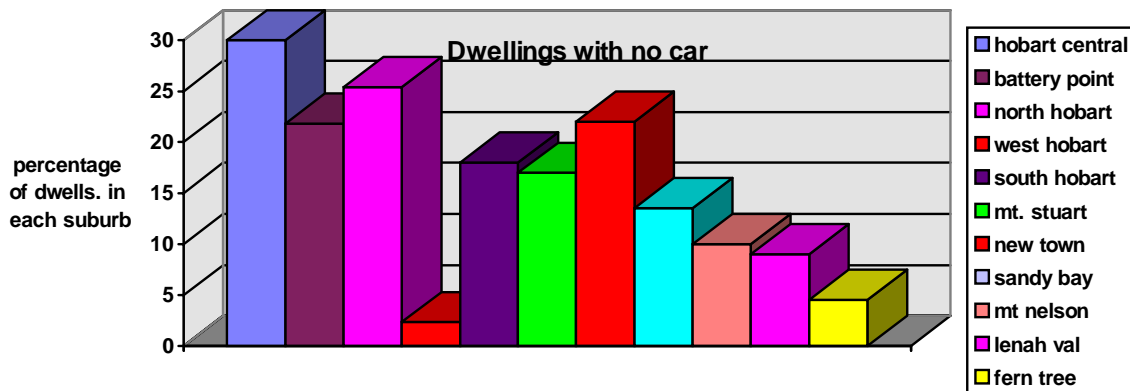
Table 8



Overall only 16.3% of dwellings had no car available. The majority of dwellings - 42.6% - had one car while a further 35.8% of dwellings had two or more cars.

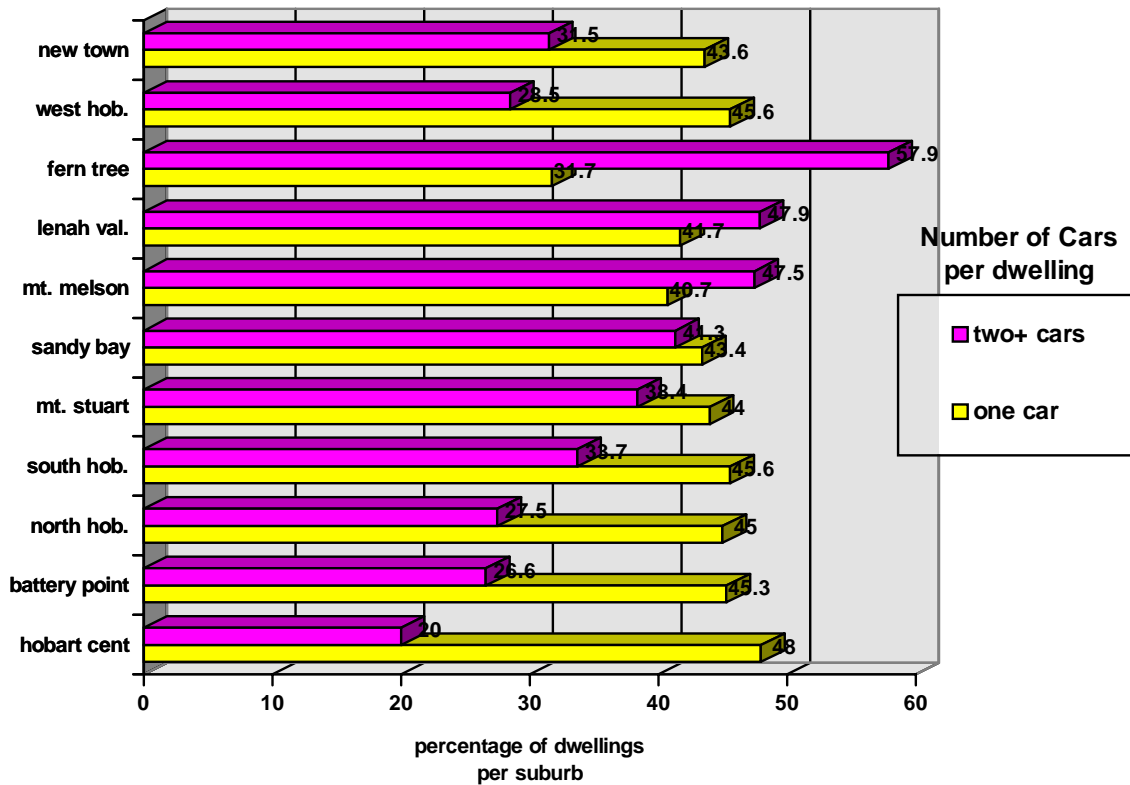
- **Suburban Variations in Car Parking Per Dwelling - No car households**

Table 9



There are considerable variations between suburbs in the proportions of dwellings without cars. Fern Tree only had 4.5% of dwellings without a car compared to Hobart Central with 29.3%. In all, six suburbs have higher than average proportions of dwellings with no car. Apart from Hobart Central these include North Hobart 25.4%, West Hobart 22.3%, Battery Point 21.8% and South Hobart with 18% of dwellings. Fern Tree and Lenah valley had the lowest proportions of all in this category. In Lenah Valley only 9.1% of dwellings did not have a car.

- Suburban Variations in Car Parking Per Dwelling - One or more cars per household



It can be seen from the above graph that houses in the outlying suburbs are more likely to have 2 or more cars per household than the inner suburbs. In Fern Tree approximately 58% of all dwellings have 2 or more cars. Other suburbs with higher than average proportions of dwellings with two or more cars are Lenah Valley, Mt. Nelson, Sandy Bay and Mt. Stuart. Suburbs with lower than average proportions are South Hobart, New Town, West Hobart, North Hobart, Battery Point and Hobart Central.

#### 4.6.1 Conclusions:-

The private car is the predominant means of transport, only 16.3% of dwellings in Hobart do not have one or more cars. There is no indication of a change in this trend. The reliance on private cars and the number of cars per dwelling is greatest in the outer suburbs of Fern Tree, Lenah Valley, Mt. Nelson and Sandy Bay. In inner suburbs such as Central Hobart, Battery Point, South Hobart, West Hobart the proportion of dwellings with one or no cars is greater.

The data indicates that in most instances there is no justification, for building dwellings in Hobart without at least one, and for new houses on the suburban fringe, two or more car spaces. Variation to these minimum on-site provisions could be justified for inner urban infill development and/or for sites in close proximity to a bus route. The justification for any such variations should form part of a parking impact statement to be considered as part of the development application.



## 5. Analysis

### ***5.1 Format for Proposed Policy and Standards***

This study recommends that any new provisions should follow a performance based approach in accordance with current planning practice and similar to that promoted in the Draft State Model Planning Scheme Framework and Council's recently adopted 'Rescode'.

A performance based approach provides opportunities for innovation while maintaining acceptable outcomes by stating what the level of required performance is in respect to a specific item or 'Principle of Parking and Movement' by means of 'Performance Criteria' without requiring that a specific standard shall be applied. This approach has the following advantages:-

- focuses on objectives and desired outcomes;
- offers an opportunity for diversity and choice;
- allows site responsive design solutions; and
- provides flexibility to respond to market needs and preferences.

Section 3 of this Study examined the operation of the existing Parking Schedule in the Hobart Planning Scheme and the relevant sections from other schemes and parking policies within Tasmania and nationally. Based on this review it is evident that the downfalls of existing systems of prescriptive standards can involve the following:-

- The original purpose of and justification for the standards are often obscure.
- Standards are inclined to become overly rigid, leaving little flexibility.
- They restrict choice, are unable to respond to changing demands and stifle innovation.
- They protect outmoded practices and inhibit cost-effectiveness.
- They are often viewed as a single entity—not to be varied for fear of creating a precedent.

However, it is not suggested that the existing system of prescriptive standards will disappear.

It is simple, predictable, practical and appropriate for routine applications, most of which are small scale. This traditional approach also responds to the needs of a large proportion of the development industry. However, it is expected that there will be an increasing need for more flexible and responsive approaches. The proposed format provides two systems by which development proposals can be generated and assessed. Developers are able to choose whether they want to either:-

- design to the Performance Criteria\* (the performance approach); or
- design to the Acceptable Solutions \*\* (prescriptive standards).

**\* Performance Criteria**

Performance Criteria are general statements which establish the level of performance in respect to the relevant Principles of Parking and Movement. They are not meant to be overly limiting in nature. Instead, they provide designers and developers with an opportunity to develop a variety of design responses and provide a basis for Council in exercising 'discretion' in respect to a variation.

**\*\* Acceptable Solutions**

Acceptable Solutions are provided as a bench mark of performance and an example of an acceptable means to achieve the Performance Criteria. They may not be appropriate in all instances.

Under this system, a proposal may either be assessed subject to the relevant 'Acceptable Solution' or if a variation is sought it may be assessed as a 'discretionary ' application in accordance with the relevant 'Performance Criteria'.

This format requires that the proposed new provisions should include the following:-

- An introduction which clearly explains the structure of the Schedule and how to apply the performance based provisions.
- Principles of Parking and Movement - which identify the aims of the Schedule and provide a comprehensive strategic basis to aid assessments.
- Performance Criteria - these statements establish the level of performance necessary to met each of the stated Principles. These Criteria should include the following:-
  - Parking supply;

- Design of parking facilities;
  - Facilities for the disabled, cyclists etc.;
  - Design of accessways and manoeuvring areas;
  - Traffic generation & Off -site parking provisions; and
  - Protection of Heritage and streetscape values.
- Acceptable Solutions - where the Performance Criteria can be quantified, Acceptable Solutions are identified as a means of meeting the Criteria . In cases where the relevant Acceptable Solution is not adopted, Council has a discretion to refuse or permit a proposal for development or change of use.
  - Information requirements for Assessment - identifies any information required in the proposal which is not otherwise required by the general provisions of the scheme.
  - Variations -identification of the provisions which may be varied and the basis for the consideration of variations.
  - Requirements for Traffic Impact Assessments - where it is proposed not to follow the specified on-site standards or in the case of unique developments for which no standards exist the Traffic Impact Assessments shall provide the basis for any proposed parking and access solution. This section shall define the content and scope of such assessments.
  - Definition of terms - defines the use categories and other terms not otherwise identified in the scheme.

## **5.2 On-Site Parking and Access Provisions**

### **5.2.1 Parking Space Standards**

Based on the research undertaken for this study, it is considered that the proposed on - site parking standards should meet the requirements of AS 2890.4 and the following criteria:-

- the proposed use categories in the Standards should relate to the use classes defined in the Scheme - since the existing Scheme use definitions are not being reviewed at this time (although this may be undertaken as part of any general review of the Scheme);
- the list of uses should be comprehensive and should encompass all uses defined within the existing scheme;

- all parking and access standards should be consolidated into a single schedule (for example parking standards for 'bed and breakfast' developments currently occur within Schedule A and 'Rescode' parking standards are in Schedule K of the Scheme);
- the use categories should address emergent commercial uses (Eg. video store and convenience store/service station) or service industries (Eg. twenty-- four hour medical centres and tourist hotels) where it has been determined that such uses have a distinct function and parking generation profile;
- the application of the Australian Standards and how they are to be interpreted in support of the proposed Scheme standards should be clarified;
- the basis for the establishment of the various standards should be identified.

Based on the above criteria, the following table establishes the various categories of use that should be included within the proposed provisions. The table contains the standards for the number of on-site spaces that should be applied to each use and the justification for the proposed uses and standards.

The following table identifies the current Use Group and the Defined Use as they are contained in the Scheme. In order to enhance the relevance of any proposed new on-site standards to various development types it is proposed where necessary to split the defined uses into a number of categories. The proposed use categories appear in the second column of the table along with the specified parking space standard. The justification for a change in any existing standard is identified in the third column.

**Table 11. On - Site Car Parking Spaces**

Use group / defined use	category of use / car spaces required	Justification
<b>Residential</b>		
1	house/flat (per dwell) small ( $\leq 75 \text{ m}^2$ ) / 1 med. ( $=75\text{m}^2$ to $110 \text{ m}^2$ ) / 1.25 large ( $\geq 110 \text{ m}^2$ ) / 1.5 visitor parking $1/0.5$	These standards have recently been revised as part of the RESCODE scheme review and are further reinforced by research undertaken as part of AMCORD. Local parking generation for dwells. has been further surveyed as part of this Study. This research indicates that demand is not influenced by different unit configurations (eg. blocks of flats)
1	home occupation	no additional requirement Use does not increase activity beyond residential expectations.
1	elderly persons units ( housing for the aged or disabled ) ( self contained units ) • 2 per 3 units + • 1 per 5 units ( visitors ) -	This is based on RTA guide and is a lesser requirement than small dwell. - acknowledges residents lower propensity to drive.
4	domestic business	compliance with relevant standard for house plus 1 per non res employee plus on-site goods delivery provisions Current provision maintained but relates to employee rather than vehicle - if employee is resident and normal standards for house are met no additional justification for spaces other than goods delivery.
3	multiple dwellings	subject to site survey No data exists to cover diverse range of possible uses which are included in definition.
<b>Health &amp; Community Services</b>		
5	consulting rooms • <b>profess. consulting rooms</b> / 3 per practitioner • <b>extended hours medical centres</b> / 4 per $100 \text{ m}^2$ G.F.A.	The proposed standard relates to surgery instead of floor area which is more relevant to the amount of parking generation also acknowledges emergent medical centre use.
5	community centre • subject to site survey ( not including child care centre ) • child care centres 1 for each 4 children	No data exists to cover diverse range of possible uses which are included in definition. However child care centres are unique within use grouping RTA data exists and should be specified separately.
5	place of public worship	1 per 10 seats Low level of development activity. No justification for change. Ability to vary if required.
6	hospital	subject to site survey
6	hospital outpatient facility	subject to site survey Surveys indicate hospital use is dynamic and can vary widely between sites. Prescribed standards are not appropriate.
6	welfare institution <b>hostels, nursing &amp; convalescent homes</b> • 1 per 10 beds ( visitors )+ • 1 per 2 employees + • 1 per ambulance	The proposed standards are based on more current RTA data.
<b>Education &amp; Cultural Services</b>		
7	prim. & second. schools	2 per 3 staff + 4 per visitors + 3 bus Revised standards based on local site specific surveys.
7	matric. college	1 per 2 staff + 1 per 20 students
7	tertiary institutes	1 per 2 staff + 1 per 10 students Surveys confirm existing standards appropriate
7	galleries, museums, libraries	1 per $80 \text{ m}^2$ floor area Surveys confirm existing standards appropriate Existing standards retained in absence of any original data.
		<b>James Douglas &amp; Associates Pty. Ltd. Page 109</b> in association with Tony Peters - Traffic Safety Consultant

Use Group/ defined use	category of use / car spaces required	Justification										
8	<p><b>Retail, Offices &amp; General Commercial</b></p> <p>office 1 per 40 m<sup>2</sup></p>	<p>A doubling of existing requirement in accord with RTA standard in response to private vehicle dependency, open plan - smaller working spaces, revised work practices.</p>										
9	<p>shop, local shop, bank</p> <p><b>commercial premises -</b> 1 per 40 m<sup>2</sup></p> <p><b>Car tyre retail outlets ( which ever is the greater of )</b></p> <ul style="list-style-type: none"> <li>• 3 spaces per 100 m2 GFA, or</li> <li>• 3 spaces per work bay</li> </ul> <p><b>Markets</b> 2.5 spaces per stall</p> <p><b>Bulky goods retail stores</b> compare other devels.</p> <p><b>Video stores</b> 6.1 spaces per 100 m2 GFAV</p> <p><b>Bottle Shops</b></p> <ul style="list-style-type: none"> <li>• at least 2 service lanes with a separate parking area for browse shoppers</li> <li>• precautions such as clear through lanes should be considered to reduce the likelihood of vehicle queues extending onto the street</li> </ul>	<p>Surveys confirm RTA Guide standards. Premises in neighbourhood centres may be considered for lesser requirements on the basis of shared parking.</p> <p>These emergent uses are not currently addressed. Given the likelihood of future applications inclusion of the RTA standard is justified.</p> <p>Based on survey data, inclusion as a separate use is justified.</p>										
9	<p>takeaway food shop, supermarket</p> <p><b>Take away food outlets</b> ( no on-site seating )</p> <ul style="list-style-type: none"> <li>• 12 spaces per 100 m2 GFA ( on- site seating )</li> <li>• 12 spaces per 100 m2 GFA + greater of 1 space per 5 seats ( internal &amp; external ), or 1 space per 2 seats ( internal )</li> </ul> <p>( on- site seating &amp; drive through facilities)</p> <ul style="list-style-type: none"> <li>• 1 space per 2 seats ( internal ), or</li> <li>• 1 space per 3 seats ( internal and external)</li> <li>• + queuing area for 5 to 12 cars</li> </ul> <p>specific provs.(+ normal requirements ) for -franchised outlets such as Macdonald's, Kentucky , Burger King etc. are 10 car lengths in drive through capacity however queue must be able to extend to 12 cars without disruption.</p>	<p>Greater differentiation between types of take away shops is necessary given varying parking profiles. Local surveys have been conducted to verify the RTA standards.</p> <p>Survey results indicate that the Franchised Outlets have similar parking generation profiles.</p>										
	<p><b>Service station &amp; convenience stores</b></p> <ul style="list-style-type: none"> <li>• 6 per work bay and/or</li> <li>• 5 per 100m2 GFA of conven. Store</li> </ul>	<p>Industry trends indicate that new and redeveloped stations may incorporate a convenience store function.</p>										
	<p><b>Shopping Centre/Supermarket</b></p> <table border="1" data-bbox="494 1765 901 1906"> <thead> <tr> <th>GLFA (m<sup>2</sup>)</th> <th>spaces per 100m<sup>2</sup> GLFA</th> </tr> </thead> <tbody> <tr> <td>0- 10K</td> <td>6.1</td> </tr> <tr> <td>10- 20K</td> <td>5.6</td> </tr> <tr> <td>20- 30K</td> <td>4.3</td> </tr> <tr> <td>over 30K</td> <td>4.1</td> </tr> </tbody> </table>	GLFA (m <sup>2</sup> )	spaces per 100m <sup>2</sup> GLFA	0- 10K	6.1	10- 20K	5.6	20- 30K	4.3	over 30K	4.1	<p>Local surveys confirm that this use generates parking profiles which are distinct from a takeaway - justifies separate listing. Local data confirms RTA specification but may be considered for lesser requirements on the basis of shared parking.</p>
GLFA (m <sup>2</sup> )	spaces per 100m <sup>2</sup> GLFA											
0- 10K	6.1											
10- 20K	5.6											
20- 30K	4.3											
over 30K	4.1											
10	<p><b>Service Industry</b></p> <p>holiday unit, motel</p> <p><b>motel, holiday unit</b></p> <ul style="list-style-type: none"> <li>• 1 per unit +</li> <li>• 1 per 2 employees</li> </ul>	<p>Function rooms and restaurant are integral to most motel developments and should be specified within the use category.</p>										

Use Group	defined use	use category / car spaces required	Justification
		( where function rooms &/ or restaurant included ) <ul style="list-style-type: none"> <li>• 15 per 100 m2 GFA of restaurant/ function room, or</li> <li>1 per 3 seats, whichever is greater</li> </ul>	
		<b>caravan parks</b> <ul style="list-style-type: none"> <li>• 1 per caravan site</li> </ul>	This use currently not in Schedule E.
10	bed & breakfast	<ul style="list-style-type: none"> <li>• 1 for the owner +</li> <li>• per 2 beds</li> </ul>	This use currently not in Schedule E. Current standards have been recently established in Sched A -do not justify review at this time.
10	hotel	<b>hotel ( traditional )</b> - to be determined by site specific survey <b>hotel ( tourist )</b> <ul style="list-style-type: none"> <li>• 1 per 5 bedrooms ( 5 star international )</li> <li>• 1 per 4 bedrooms +</li> <li>• 2 coach lay-by spaces +</li> <li>• 1 taxi lay-by space per 100 bedrooms ( 3&amp; 4 star )</li> </ul>	The surveys indicate the function of traditional hotels is varied, many now have similar parking profiles as restaurants or cannot provide on-site parking. There is no correlation between demand and floor area. RTA surveys have established a direct correlation between the level of service and parking profile for tourist hotels which primarily provide accommodation.
10	club, cinema, theatre or restaurant	<b>club, cinema or theatre</b> - subject to site specific survey <b>restaurant -</b> <ul style="list-style-type: none"> <li>• 15 per 100 m2 GFA, or</li> <li>• 1 per 3 seats , which ever is the greater</li> </ul>	Club, cinema and theatre are unique uses which require specific surveys and should be considered for parking discount on the basis of shared parking. The RTA surveys show that an increased provision is justified.
11	active recreation	<b>marina</b> <ul style="list-style-type: none"> <li>• 0.6 per wet berth +</li> <li>• 0.2 per dry storage berth +</li> <li>• 0.2 per swing mooring +</li> <li>• 0.5 per employees</li> </ul> <b>other uses</b> subject to site specific survey	RTA has surveyed standards for marinas and these should be included. No change proposed in respect to other active rec. activities.
12	amusement machine centre, health studio ( gym )	<b>amusement machine centre -</b> 1 per 45 m <sup>2</sup> floor area <b>gymnasiums</b> 3 per 100 m <sup>2</sup> GFA	Differentiation within the use class is required given different parking profiles. RTA standard for gyms. is proposed for adoption.
<b>Industrial</b>			
13	service industry or showroom	<ul style="list-style-type: none"> <li>• 1 per 100 m2 floor area or</li> <li>• 1 space per 2 employees which ever is greater</li> </ul>	No justification for change in existing standard.
14	light industry, warehouse or saleyard	<b>factories</b> <ul style="list-style-type: none"> <li>• 1.3 per 100 m<sup>2</sup> floor area or</li> <li>• 1 space per 2 employees which ever is greater +</li> </ul> <b>warehouse or saleyard</b> <ul style="list-style-type: none"> <li>• 1 per 300 m<sup>2</sup> GFA +</li> <li>• 1 semi-trailer space</li> </ul>	Standards has been amended in accord. with RTA standard.
		<b>motor showrooms</b> <ul style="list-style-type: none"> <li>• 0.75 per 100m2 site area +</li> <li>• 6 per work bay ( if applicable )</li> </ul>	Specific use and parking requirement identified by RTA.
15	transport depot, timber yard or industry	1 per 2 employees	No justification for change in existing standard.

As stated earlier, it is not proposed to introduce new use definitions or use groups into the Scheme. However, the proposed parking standards will divide the existing defined uses into various categories with standards for each. It is important that the link between the Use Group/ Defined Use/Use Category be clear and that the types of use and development that fall within the various categories is defined. This information is shown in the table below.

**Table 12 - Definition of Links Between Proposed Use Categories and the Use Group and Defined Uses in the Existing Scheme**

Use Group	Defined Use	Use category / definition
One / two	house /flat	nil
one	home occupation	nil
one	elderly persons unit	nil
four	domestic business	nil
three	multiple dwellings	nil
three	welfare institution	<ul style="list-style-type: none"> <li>• <b>hostels, nursing &amp; convalescent homes</b> - means residential accommodation ( in any building form ) which is used or is intended to be used permanently as accommodation for aged persons or disabled persons. This accommodation usually includes one or more of the following facilities : <ul style="list-style-type: none"> <li>• staff accommodation</li> <li>• chapel or place of worship</li> <li>• medical consulting room</li> <li>• meeting room, recreation facility</li> <li>• shops, kiosk</li> <li>• therapy room</li> <li>• any other facilities specifically for the use or benefit of aged, sick or disabled persons</li> </ul> </li> </ul>
five	consulting rooms	<ul style="list-style-type: none"> <li>• <b>professional consulting rooms</b> - means a use which complies with scheme definition for consulting rooms</li> <li>• <b>extended hours medical centres</b> - means an establishment which is used by three or more health care personnel for professional purposes who employ three or more persons in connection with the practice and whose hours of operation extend beyond normal business hours.</li> </ul>
Five	community centre	nil
five	place of public worship	nil
six	hospital	nil
six	hospital outpatient facility	nil
		•
seven	prim. & second. schools	nil
seven	matric college	nil.
Seven	galleries, museums, libraries	nil
eight / nine	offices / shop, local shop, bank	
nine	takeaway food shop, supermarket	<p><b>take away food outlet</b> - means a premises whose principal use is for the sale of pre-prepared food primarily for consumption off-site including the following three types :</p> <ul style="list-style-type: none"> <li>• food outlet for take-away service, with no seating provided for the on-site consumption of food</li> <li>• food outlet for take-away service, with seating also being provided for on-site food consumption</li> <li>• developments with features of the above second category with the addition of a drive-through service for customers not wishing to consume the food on the premises</li> </ul> <p><b>service station &amp; convenience store</b> - means a drive-in commercial premises used for the fuelling, repairing or servicing of motor vehicles &amp; may combine the retailing of other goods, with the hours of operation extending beyond</p>



Use Group	Defined Use	Use category / definition
		normal retail hours.  <b>shopping centre / supermarket</b> means a building ( or group of buildings ) or place in single or multiple tenancies, used for the purpose of selling, exposing or offering for sale by retail, goods, merchandise or the provision of commercial services.
ten	holiday unit, motel	<b>holiday unit , serviced apartment, motel, -</b> means the means a place or building as defined by the Scheme which may or may not include restaurant and function facilities which serve the general public
ten	bed & breakfast	nil
ten	hotel	<b>hotel ( traditional ) -</b> means a means a place or building as defined by the Scheme whose primary function is other than the provision of tourist accommodation
		<b>hotel ( tourist ) -</b> means a place or building as defined by the Scheme whose primary function is the provision of tourist accommodation Hotels with a 3, 4 or 5 star rating are generally considered to be tourist hotels. The level of accommodation and facilities provided determine a hotel's rating. For example, 5 star international hotel developments incorporate the operational characteristics of retail, entertainment, conference facilities and health clubs which cater for the international visitor market.
Ten	club, cinema or theatre or restaurant	nil.
eleven	active recreation	<b>marina -</b> means a building, place, or marine facility used for the berthing, storage, maintenance, or repair of marine craft and may include, launching ramps, hardstand areas, jetties, berths, chandlery, shop and ancillary facilities.
twelve	amusement machine centre, health studio	<b>gymnasium -</b> means a building, room or a number of rooms, used for organised or instructed indoor exercise, typically including aerobics, weight / circuit training, etc. Ancillary facilities such as health care services, spa / sauna and a small apparel sales area are commonly provided within gymnasiums.
Thirteen	service industry or showroom	nil
fourteen	light industry, warehouse or saleyard	<b>factory -</b> means a place or building used for the purpose of industry, where industry means any manufacturing process and / or the breaking up or dismantling of any goods or any article for trade, sale, gain or as ancillary to any business  <b>warehouse -</b> means a place or building as defined by the Scheme
fifteen	transport depot, timber yard or industry	nil

### 5.2.2 Access Provisions

The main areas which have been identified, from consultation with Hobart City Council officers, for the access provisions are sight distance, driveway widths and construction specifications.

Reference has been made to the NAASRA Guide to Traffic Engineering - Part 5 "Intersections at Grade", Australian Standard AS 2890.1 Parking Facilities, Tasmanian Model Planning Scheme and TASCORD. The following sections address the listed areas of concern and the recommendations have been based on the referenced material.

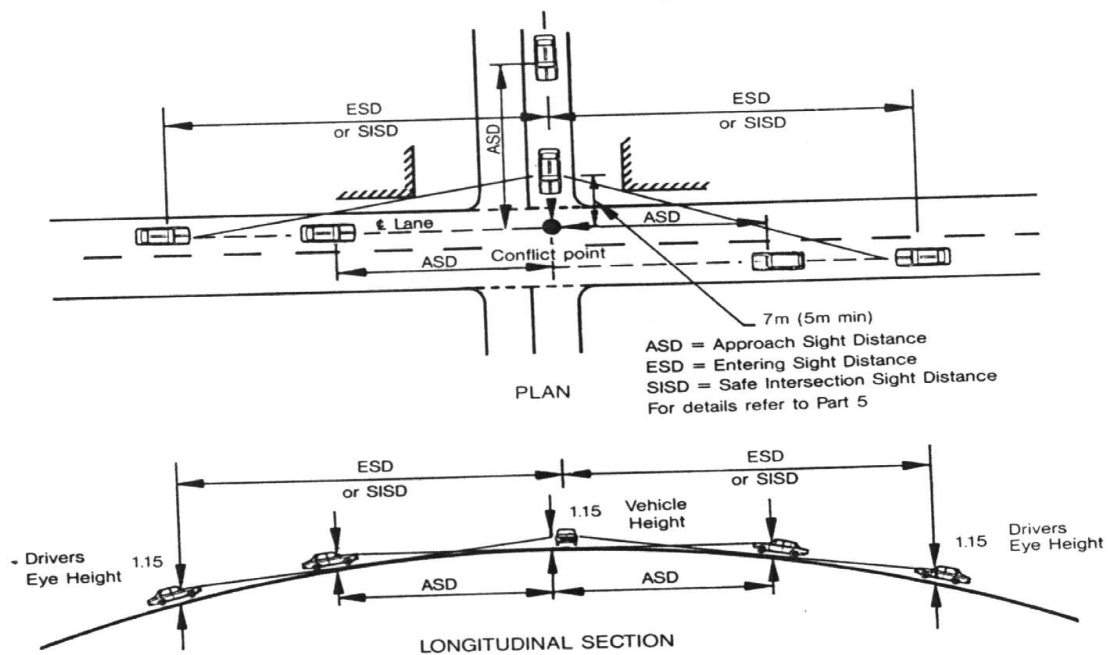
- **Sight Distance**

The Department of Infrastructure Energy and Resources guidelines have been copied from the NAASRA publication "Guide to Traffic Engineering Practice - Part 5 - Intersections at Grade".

This publication states that there are three sight distance criteria which are applicable to the various aspects of traffic operations at intersections. These are:-

- **Approach Sight Distance** - the minimum requirement to provide a driver of a vehicle adequate distance to observe the road layout in sufficient time to react and stop if necessary before entering the conflict area;
- **Entering Sight Distance** - is the sight distance required for minor road drivers to enter a major road via a left or right turn, such that traffic on the major road is unimpeded; and
- **Safe Intersection Sight Distance** - the sight distance required for a driver on the major road to observe a vehicle from a minor road approach moving into a collision situation and to decelerate to a stop before reaching the collision point.

An extract of the NAASRA sight line drawing is presented for information below:-



### Entering Sight Distance and Safe intersection Sight Distance

(Extract - Guide to Traffic Engineering Practice Part 5 - Intersections at Grade )

The specific intersection sight distances which would apply for a 60km/hour urban environment under the above definitions are:-

- Approach Sight Distance - 55 metres;

- Entering sight distance - 160 metres; and
- Safe Intersection Sight Distance - 105 metres.

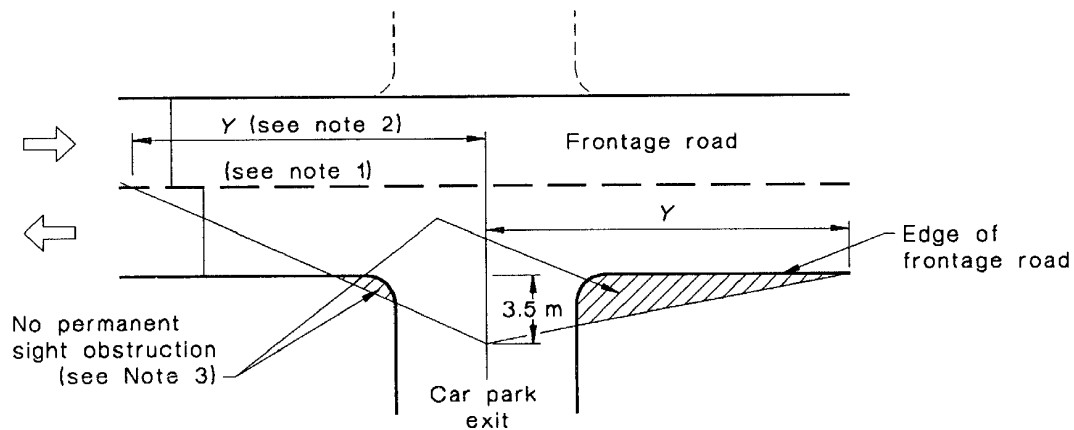
It is important to note that the referenced NAASRA publication does not specify mandatory criteria in that it states “**should**” and that it also provides the following application of the standard guidance “.....***In any particular case the sight distance provided will reflect cost-effectiveness, i.e. the balance between the cost of achieving desirable standards and the consequences of adopting reduced standards.***”

The above sight distance criteria should be applied to new intersection design however it is important to note that there are a great many existing urban intersections which do not meet the sight distance criteria and still operate safely.

Car park access sight distances are specified in the Australian standard AS 2890.1 - “Off - Street Parking” and these could be used as examples of urban area link sight distance requirements. This standard specifies 105 metres desirable and 55 metres minimum sight distance for frontage road speed range of 55 to 64 km/hr. The sight distances are based on the AUSTRROADS criteria of “safe intersection sight distance” (105 metres) and “approach sight distance” (55metres) for urban conditions. It will be noted that the “approach sight distance” is considered to be an acceptable sight distance for the car park exit.

The frontage road speed is taken as the posted or general speed limit unless the 85<sup>th</sup> percentile speed is significantly higher for the Australian Standard calculation.

The following figure depicts the sight distance triangle as used in the Australian Standard to assess the sight distance requirements for a car park exit.



### - Sight Distance Requirements at Car Park Exits

(Extract -AS 2809 Parking Facilities - Part 1 : Off - Street Car Parking)

The application of the Department of Infrastructure Energy and Resources sight distance standards, whilst providing a good starting point, in most urban situations provides overly generous safety margins and would be hard to achieve, inappropriate and unnecessary around the Hobart Municipality. It is therefore suggested that the more appropriate starting point would be to use the Australian Standard "Entering Sight Distance" approach. Depending on the site characteristics in many instances a sight distance equivalent to "Safe Intersection Sight Distance" or less may be satisfactory.

Failure to achieve the Australian standard sight distance should not necessarily prevent the access being provided as an engineering assessment should be undertaken to assess the safety aspects and potential risk associated with the provision of the access. Any such engineering assessment should be based on the road safety audit principles of taking account of the needs of all road users, assessing (by observation) the existing operational characteristics of the road traffic, making due allowance for traffic volumes and the road's existing safety record.

In conclusion it should be borne in mind that any engineering judgement must be based on the previously quoted NAASRA principle for sight distance assessment of - "***In any particular case the sight distance provided will reflect cost-effectiveness, i.e. the balance between the cost of achieving desirable standards and the consequences of adopting reduced standards.***"

• **Drive way Access Standards**

The RTA Guide to Traffic Generating Developments recommends the following design considerations when selecting driveways:-

- position the entrance at the first vehicular driveway from the adjacent kerbside lane;
- avoid reversing movements into or out of public streets (except in the case of individual dwelling houses);
- avoid arrangements which may result in on street queuing;
- promote the use of physical pedestrian barriers to discourage motorists from parking on the opposite side of the development and crossing the road to get to the site;
- position each driveway so that it is clear of all obstructions, e.g. poles and trees, which may prevent drivers from having a timely view of pedestrians; and
- design each driveway so that it is relatively level within 6 metres of the site boundary or any pedestrian way; the recommended grade is 5%; sign post each driveway with the appropriate "entry", "exit" and "keep left signs" which are constructed in accordance with Australian Standard AS 1742.

The RTA has adopted a classification for 7 types of access driveways and of these types 1 - 5 are for cars and light vehicles and types 6 - 7 for heavy vehicles. Types 1-5 driveways are the same as those used in Australian Standard AS 2890.1. The following tables specifies the relevant criteria for each of the driveway classes:-

Type	Entry Width (Metres)	Exit Width (Metres)	Min. Driveway Separation (Metres)	Kerbline Splay (Metres)	Kerb Return Turn Out Radius (Metres)
1	3-6	combined	NA	0.5	-
2	6-9	combined	NA	1	-
3	6	4-6	1-3	1	2-9
4	6-8	6-8	1-3	1	2-9
5	Direct feed from a controlled intersection via a dedicated public roadway				
6	8-10	8-10	3	1	2-9
7	10-12	10-12	3	1	2-9

**Recommended Driveway Types**

Road Frontage	Number of Car Parking Spaces Served by the driveway					Heavy Vehicles
	< 25	25-100	101-300	301-600	> 600	

Major	1-2	2-3	3-4	4	5	7
Minor	1	1-2	2-3	3-4	4	6

**Selection of Driveway Types based on Number of Parking Spaces**

The following points are suggested for consideration when designing driveways:-

- where a development is served by multiple access points, it is recommended that each access driveway is on the basis of the number of the number of parking spaces effectively served by that driveway;
- the recommended driveway types does not imply that frontage on to a major road is acceptable an all situations; and
- where a range of driveway types are given, the choice must be based on the particular circumstances of the proposed development.

The RTA guide also recommends a range of design criteria for kerb splay and returns, turning radii, internal road layout and parking area design which could be adopted by the Hobart City Council as part of a development parking and traffic access design guide.

The TASCORD figure 3.1 provides a suitable reference for determining residential drive way width criteria. The residential driveway access design criteria which have been specified in the following table have been derived from the TASCORD material.

On site Parking Spaces	Driveway width	Conditions
3 or less	3.0 metres	none single entry to street permitted
4 to 9	3.0 metres	provide on site turning and forward egress if accessing a collector road
10 to 20	3.0 metres	as above and provide access widening to 5.0 metres for 7.0metres from street
21 or more	6.0 metres	Provide on site turning and forward egress

**Residential Access Driveway Design Criteria**

In addition to the widening specified for 10 to 20 spaces accessing collector roads the specified driveway access widening could also be considered when then are sight distance deficiencies on the accessed street. Where the length of 3.0 metre wide driveway, approach sight distance and projected traffic volumes are such that the meeting of vehicles travelling in opposite directions is considered to create a problem then passing bays should be required. These bays should be strategically located along the driveway so that opposing vehicles have sufficient advance warning to pull into them without the need to reverse.

The existing Schedule E requires that footpaths of widths specifically tied to the number of lanes and their width be provided. This provision whilst on the surface appearing desirable for pedestrian amenity, in most situations, cost effective. Ideally the access driveway should be designed and treated similar to "pedestrian zones" which work on the principle that at posted speed limits of around 10 km/hour pedestrians and cars can safely inter mix. It is therefore recommended that the footpath specification be deleted and be replaced with a performance based criteria along the following lines:-

"No footpath will be required unless in Council's opinion the prevailing vehicle speeds or potential pedestrian/vehicle conflicts are sufficient magnitude to create a potential safety problem for pedestrians."

The main issue with the construction materials is debris run off onto the road way and into the storm water system. This problem could be largely addressed by broadening the driveway construction material restrictions to include:- "concrete, bituminous paving, paving blocks or well compacted gravelled and reinforced grassed hard standing".

#### ***5.4 Guidelines for the Assessment and Provision of Off - Site Parking***

Car parking within the City of Hobart is provided by both property owners and the City Council. The Council manages both kerbside and off street parking and has authority under the Traffic Act and Local Government Highways Act for the management of time restricted parking and parking and voucher machines within these areas. The private sector has no cost effective option for controlling car parking space and to effectively control public intrusion into it's spaces has to resort to civil trespass prosecution.

Demand for both commuter and customer parking within the Cities' commercial precincts is increasing as the surplus in Council car parking supply, includes both off-street and on-street, capacity is being eroded over time. The impacts of this shortfall are being addressed by the imposition of more and shorter time restrictions and increased enforcement. One significant side impact of these changes is a migration of parking offenders from the Council operated spaces to the private lots.

The larger privately owned car parking lots are arguably public streets and as such could have time restricted parking applied and enforced by either Council or Tasmania Police. The option therefore exists for Council to enter into a "partnering" arrangement with the private owners for the management of their parking supply. A form of this "partnering" arrangement already exists at Purity, Mayfair and Coles Sandy Bay where Council has authorised the installation of time restricted parking signs and undertaken to enforce the restrictions. This approval and

enforcement is undertaken on the basis of Council retaining all of the illegal parking fine revenue and conducts enforcement in accordance with their public car parking space policy.

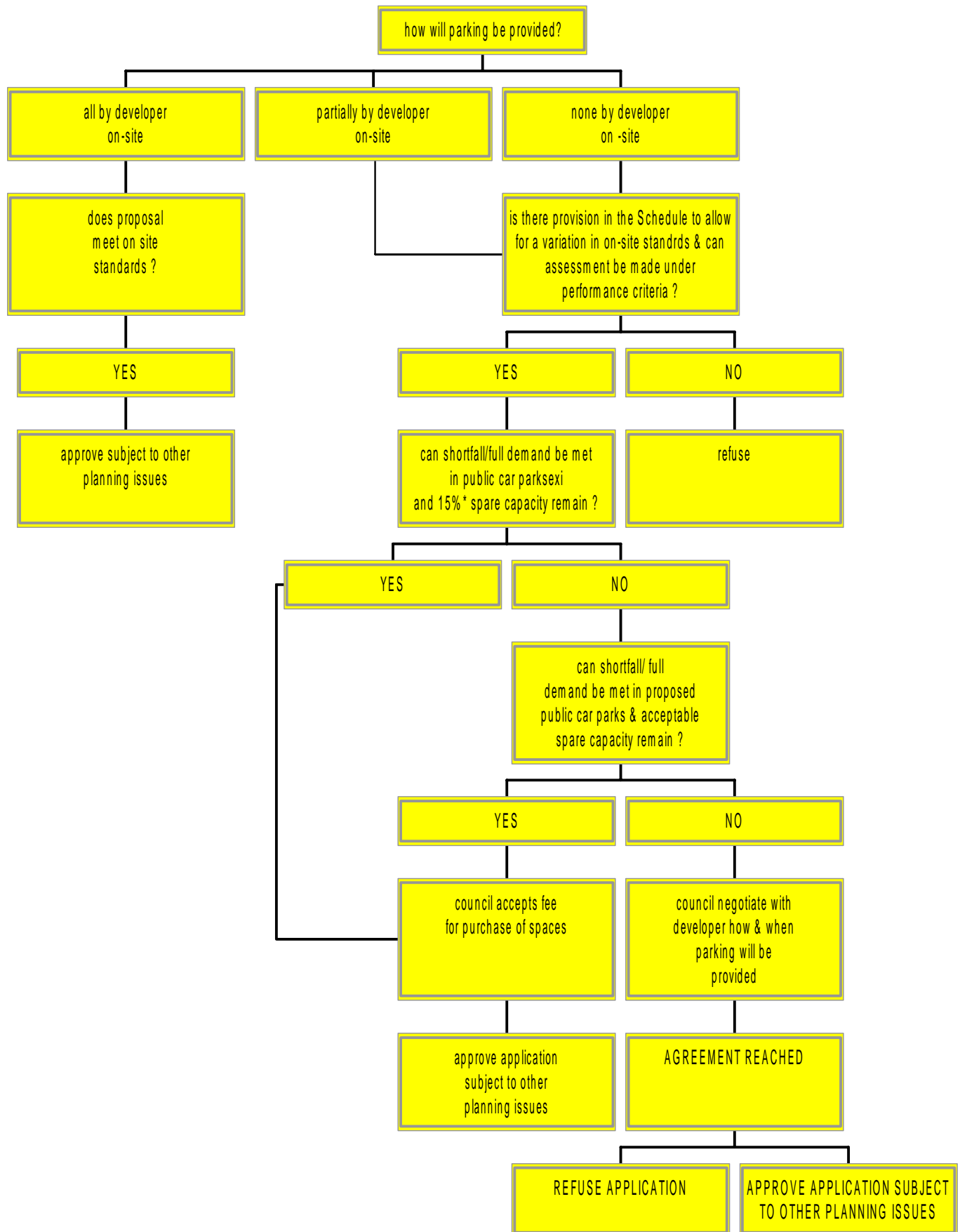
Council also has the option of gaining further management control of the parking supply within precincts by leasing private car parking spaces or offering incentives such as a share of maintenance as an incentive to enter into a formal "partnering" agreement.

The main objective of a parking management partnership is to obtain a consistent and equitable utilisation of all parking within the City of Hobart commercial precincts consistent with the best community benefit and customer needs.

Once Council has gained a majority control of the parking supply within a precinct it has the opportunity to then to balance the parking demand/supply equation and off-set a development's parking supply requirements against the use of the parking supply which is under Council's control.

There are often situations where it is impractical or undesirable for a developer to provide on-street parking and in these situations an allocation of the precinct's Council controlled parking supply should be considered. The section 3.3.4 of this report outlines a process for the assessment of a developments parking demand and the allocation of a precinct's parking supply. This process is outlined in the decision flow chart "Guidelines for the Management of Parking Demand/Supply" which follows.





## Guidelines for the Management of Parking Demand / Supply

The key issues relative to the production of cost effective outcomes from the parking demand supply/decision making process are:-

- **Assessment of parking demand** - is there a demonstrated lesser parking demand than the Schedule requirement and can this lesser demand be substantiated?
- **Parking Supply** - is there a demonstrated surplus of parking supply and is this surplus appropriately located and of sufficient quantity to support the proposed developments either excess to site or revised total needs of the development?
- **Parking Supply Surplus** - will there be a surplus of 10% of the parking supply after allocation to the development?
- **Shared Parking** - is there a temporal displacement between the existing parking supply's peak parking accumulations and the development's parking accumulation demands?
- **"Partnering"** - is the entering into a formal parking partnership for the better public good?

## 6. Recommendations

### ***6.1 Proposal for a New Parking and Access Schedule***

The following new Parking and Access Schedule is recommended for inclusion within a future scheme revision.

## **Traffic, Access and Parking Schedule**

### **Introduction:**

This schedule identifies the requirements for parking and access proposals for development and change of use requiring a Permit. It should be read in conjunction with all other relevant provisions of the Scheme.

A number of 'Principles of Parking and Movement' are contained within the Schedule, which Council will apply in assessing applications for a Permit. For each Principle, there are 'Performance Criteria' which establish the level of performance that a proposal must achieve in respect to the relevant Principle. Also stated are 'Acceptable Solutions' which are identified as one means of achieving the Performance Criteria.

The schedule is Performance Based and allows two avenues for application and assessment. A proposal may either be assessed subject to the relevant 'Acceptable Solution' or in cases where an 'Acceptable Solution' is not specified or is inappropriate for the particular proposal or site, it may be assessed in accordance with the relevant 'Performance Criteria'.

The Council has a discretion to refuse or permit any proposal which does not comply with the relevant 'Acceptable Solutions' and/or where assessment will be made relevant to the Performance Criteria. The justification for any such variation will be on the basis of a 'Traffic Impact Report' prepared by or on behalf of the applicant or on the basis of evidence as otherwise required by Council. The requirements for the preparation of a 'Traffic Impact Report' are identified within the Schedule along with the information required to support an application and a definition of the terms used within the Schedule.

## **Principles of Parking and Movement**

The following principles are established as a basis to guide the formation and assessment of parking and access proposals for developments and changes in the use of land and/ or buildings.

The aim of these provisions is to:-

- ensure that car parking provisions are sufficient to meet the reasonable demands of residents, employees or customers arising from changes in the use or development of sites;
- ensure that car parking spaces, accessways and maneuvering areas are designed and located in a safe and efficient manner;
- minimise the environmental effects of traffic and parking generation from new and / or changed use and developments;
- ensure that requirements for parking and access address the practical requirements of persons with disabilities;
- encourage walking and cycling by providing safe and convenient means for on-site movement of pedestrians and cyclists and parking of bicycles as appropriate; and
- ensure that the provision of access and parking does not detract from the significance of areas and places of heritage significance defined in Schedule F or as listed by the Tasmanian Heritage Council or deny the economic viability for the reuse of a place of significance.

All proposals for access and parking provisions must comply with the above Principles by meeting the following relevant Performance Criteria or Acceptable Solutions:-

## Principle

Ensure that car parking provisions are sufficient to meet the reasonable demands of residents, employees or customers arising from changes in the use or development of sites.

### Performance Criteria

P1. Carparking is provided according to projected needs and the existing supply of spaces that can effectively service the subject site as determined by a Traffic Impact Survey.

### Acceptable Solutions

A1. Car parking is provided in accordance with the requirements of Table 1.

## Principle

Ensure that car parking spaces, accessways and maneuvering areas are designed and located in a safe and efficient manner.

### Performance Criteria

P2. Carparking accessways and manoeuvring areas are designed and located to:-

- conveniently and safely serve users, including pedestrians, cyclists and vehicles.
- enable efficient use of car spaces and accessways, including adequate manoeuvrability for service and emergency vehicles.
- integrate within any related Local Area Traffic Management Plans, Parking Precinct Plans, established road hierarchy or parking search patterns.
- comply with the relevant Australian Design Standards.
- be cost effective both in terms of on-site provisions and the protection and utilisation of public infrastructure and on-site parking provisions.

### Acceptable Solutions

A2. The dimensions of car spaces and accessways comply with the provisions of Table 2 and the relevant Australian Standards.

A3. Car parking and accessways are designed to enable vehicles to turn on-site so that egress is carried out in a forward direction where

( a ) four or more on-site car spaces ( not including jockey spaces ) are provided ,or;

( b ) carparking spaces are served by a communal lane that is greater than 30 metres in length from a public carriageway, or

( c ) the point of accessway is on to a major arterial road.

## Principle

Minimise the environmental effects of traffic and parking generation from new and / or changed use and developments.

### Performance Criteria

P3. Where practical, carparking accessways and manoeuvring areas shall be designed, surfaced and sloped to facilitate stormwater infiltration on-site and to limit the potential for pollutant discharge into the stormwater system.

P4. Open carparking and hardstand areas shall be appropriately screened to enhance visual amenity and restrict the impact of noise and light emissions on any neighbouring residential properties.

P5. Parking and access provisions shall further the intent of the relevant Zone Objective and Statement of Desired Future Character.

### Acceptable Solutions

A4. Open carparking spaces and manoeuvring areas shall be surfaced with materials that provide for stormwater infiltration and shall include provisions for directing excess runoff into stormwater drains.

A5. Open carparking spaces and manoeuvring areas shall be designed to direct storm water to landscaped areas or devices capable of trapping / removing pollutants such as litter, grease, oil, detergents and sediments etc before they enter the storm water system.

A6. Open carparking and hardstand areas shall be screened so that existing streetscape character is not detrimentally impacted and the residential amenity of neighbours is not reduced by visual intrusion or obtrusion; or materially impacted by noise and light emissions from vehicles.

A7. On-site parking shall not be located in front of the building line except in the case of the following types of uncovered spaces:-

- for disabled parking; or
- in the case of residential development one jockey space providing it does not constitute more than 50% of the front garden area. The on-site driveway is considered as part of this space.

A8. Parking and access provisions shall further the intent of the relevant Zone Objective and Statement of Desired Future Character.

## Principle

Ensure that requirements for parking and access address the practical requirements of persons with disabilities.

### Performance Criteria

P6. Parking and access provisions shall meet the requirements of the Disability Discrimination Act 1995 and the Australian Standard AS 2890.1- 1993 or any other relevant standard.

P7. Parking spaces for disabled persons shall be provided at a level based upon an assessment of likely demand for such facilities.

P8. Parking and access provisions shall be designed and sited to ensure that they may provide safely and efficiently used by persons with disabilities terms of unobstructed vertical and horizontal dimension, accessibility to buildings to which they serve, lighting.

### Acceptable Solutions

A9. Parking spaces for disabled persons shall be provided in various types of development in accordance with the relevant Australian Standard or as follows:-

Type of facility	Recommended number of spaces for the disabled ( % of total )
retail shopping	1-2%
transport	1-3%
community services	2-3%
schools	2-3%
tertiary institutions	2%
recreation	2-3%
entertainment	3-4%
hospitals	3-4%
medical centres	3%

\* All percentages shall be rounded up to the nearest whole number.

This provision applies to car parks of six or more spaces (i.e where the rounding of the percentage requirement results in a space requirement of one or more).

The minimum requirement shall be at least the minimum percentage as rounded,

A10. The design of parking spaces for disabled persons shall ensure that:-

- pavement for spaces is firm and relatively level with a fall not exceeding 1 : 40
- the width of spaces should be 3.2 metres including overlap allowances (allowance for 500 mm overlap into other spaces which meet surface standards).
- spaces shall be located near the entrance to the relevant development and have a clear path of travel for wheelchairs
- spaces shall be identified with regulatory parking restriction signs

A11. Parking and access provisions for the disabled are designed and located to incorporate:-

- A ramped kerb shall be located in a suitable position to allow access to the developments which the spaces serve.
- Undercover parking (including spaces under trees or canopies) should have a minimum height allowance of at least 2500 mm

- Undercover parking should be well lit to a minimum of 150 lux  
A suitable set down area of 3.8 m. minimum width should be included within 60m of the building entrance.

## Principle

Encourage walking and cycling by providing safe and convenient means for on-site movement of pedestrians and cyclists and parking of bicycles as appropriate.

### Performance Criteria

P9 The location and design of parking facilities for bicycles and footpaths and accessways for pedestrians and cyclists are designed so that pedestrians and cyclists are protected from parked vehicles and vehicles moving onto and within the site.

P10 Facilities are provided as appropriate for bicycle parking based upon an empirical assessment of parking demand for the proposal. A guide for appropriate bicycle parking provisions is contained in Table 3.

P 11 Footpaths or shared paths are designed constructed and lit to provide secure and safe use for the projected number of pedestrians and cyclists and user types ( eg the very young, aged or disabled ).

### Acceptable Solutions

A.12 With the exception of the following Use Groups, bicycle parking facilities are provided for proposals in accordance with AS 2890.3. Use Group 1, 2, and 4.

## Principle

Ensure that the provision of access and parking does not detract from the significance of areas and places of heritage significance defined in Schedule F or as listed by the Tasmanian Heritage Council or deny the economic viability for the reuse of a place of significance.

### Performance Criteria

P.12. The following steps shall be undertaken to evaluate the suitability of a listed site or a site within a listed heritage area ( pursuant to Schedule F of the Scheme ), for the development of vehicular access and parking:-

- ( i ) The preparation of a 'Conservation Plan'\* (unless such a plan has already been done) that shows due regard for the landscape of the site, its relationship to any buildings and the overall area as well as any buildings on-site. The Conservation Plan should be taken to the 'obligation' stage where it can be clearly identified what the significance of the place is and

### Acceptable Solutions

A. 14 No Acceptable Solution is specified for this Principle.



what the proponents of the proposal are obligated to conserve on the site.

( ii ) Utilising the principles of The Burra Charter, the access and parking proposals are established on the site with regards to the conservation of its significance. The access and parking must be compatible with the established uses on the site, ( that is they must not involve any change to the culturally significant fabric on the site ), must be substantially reversible, and must not diminish the significance of the place.

( iii ) Any of the provisions of this Schedule may be varied or not required by Council where it is determined from submitted evidence ( which includes a 'Conservation Plan ' for the place ) that the provision of access and parking on the site would deny the economic viability of the reuse of a place of significance.

- *'Conservation Plan', following the guidelines identified in the manual, "The Conservation Plan: a guide to the preparation of conservation plan for places of European cultural significance" by J. S. Kerr.*

## Variations

The Council has a discretion to refuse or permit any proposed development which does not comply with the Acceptable Solutions or for which no Acceptable Solution or standard is specified. Before any requirement for car spaces, manoeuvring areas ,or accessways is reduced or waived, the applicant must satisfy Council that the reduced provision is justified due to:-

- A relevant Parking Precinct Plan.
- The availability of a surplus of public car parking in the locality ( i.e. an excess of available public parking spaces as related to demand during specific periods or over the whole day).
- Any reduction in car parking demand due to the sharing of car spaces by multiple uses, either because of variation of car parking demand due to 'out of hours' use by some uses or because of efficiencies gained from the consolidation of shared car parking spaces.
- Any surplus in car parking provisions arising from the existing or previous use of the site.
- A relevant Local Area Traffic Management Plan.
- Impacts upon Streetscape Character and amenity including pedestrian amenity.
- A Traffic Impact Study for the proposal which incorporates an empirical assessment of car parking demand (refer to the Traffic impact Study below).

- Impacts upon areas or places of heritage significance defined in Schedule F or as listed by the Tasmanian Heritage Council.
- Whether the dimensions and layout of car spaces and access lanes are generally in accordance with Australian Standard AS2890.1 -1993 or such other relevant Australian Standard .

### **Parking Precinct Plan**

A Parking Precinct Plan is a strategic plan or policy adopted by Council relating to parking of cars and other vehicles within a defined area . Such plans may form part of a more general land use or other strategic plan or policy. Such Plans may specify different requirements to those set out in Tables 1 and 2 of this Schedule.

The Parking Precinct Plan should include the following information:-

- The purpose of the Plan;
- The area to which the plan applies;
- An assessment of car parking demand in the precinct;
- An assessment of car parking supply in the precinct;
- The parking policy to be applied in the precinct; and
- Any locational, financial, heritage, landscape or other plans or requirements necessary to implement the policy.

### **Traffic Impact Study**

#### **Introduction**

A traffic impact assessment is a specialised study of the impact a certain type and size of development will have on the surrounding transportation network. The assessment may range from a cursory inspection of the site to a full blown analysis that includes adjacent streets, collector and arterial road systems. Ideally the traffic impact assessment should be included as an integral part of the development application process.

The purpose of the traffic impact assessment is to determine what impact the traffic generation, distribution, and assignment from the proposed development will have on the existing and proposed development proposed roadway network, and what impact the existing and projected traffic on the roadway will have on the proposed development.

The specific content each traffic impact assessment will vary depending on the site and the prevailing conditions.

The following headings are proposed as a check list for the minimum standard and content for the preparation of a traffic impact assessment:-

- Existing Conditions;
- Outline of the development's traffic and parking characteristics;
- Road Environment;
- Road Safety;
- Traffic Impacts;
- Suggested improvements; and
- Summary of findings.

Each of these elements are discussed in detail under the Contents of a Traffic Impact Assessment section of this report.

### **Contents of a Traffic Impact Assessment**

The following dot points outline the detail which should be included under each of the recommended headings for a traffic impact assessment.

- **Existing Conditions**

This section should provide a description of the site location and any existing or past use traffic and parking characteristics.

- **Outline of the Development's Traffic and Parking Characteristics**

This section should provide a description of the proposed development with respect to the most likely traffic and parking operational and generation characteristics. These characteristics should include nature of development, projected number and type of users, hours of operation, access and parking provisions and service vehicle activity.

- **Road Environment**

This section measures the ability of the traffic generated by the development to safely and effectively enter the road stream (absorption rate). It should identify the classified road network (major and minor roads) which may be affected by the development proposal. An inventory should be provided of the road system's traffic control and management and any short comings in the transportation system should be highlighted.

Both the annual daily traffic and peak hourly distribution of traffic flows should provide together with an estimate of speed on the road which the proposed development will access. Traffic

flow projections shall also be provided for the development and if appropriate absorption rate and capacity analysis provided of key nodes and access points.

Potential conflicts with the pedestrian and cyclist networks should be addressed.

- **Road Safety**

The two most commonly used measure for assessing the safety performance of a road network is to review the accident history and carry out a road safety audit. Whilst the review of accident history could be regarded as reactive the inclusion of the road safety audit provides an analysis of the accident potential and complements the review.

The review of the accident history involves an analysis of the 5 year accident history relative accident type, time of day and location. The review should identify both existing and potential accident blackspots, highlight those situations which could be aggravated by the proposed development's traffic impacts and list both appropriate and cost effective solutions.

It should be noted that whilst it is only necessary to report injury accidents, all accidents which are reported to and attended by Tasmania Police are recorded on the Department of Infrastructure Energy and Resources database. Accidents are recorded on the accident data base by road user movement code under the broad severity classifications of fatal, injury and property damage.

A Road Safety Audit is a formal examination of an existing or future road or traffic project, or any project which interacts with road users, in which an independent, qualified examiner looks at the project's potential safety performance relative to the needs of **all** road users - where **all** users includes motor vehicles, pedestrians and cyclists. The five stages of the road safety audit process are:-

- Stage 1 - Feasibility
- Stage 2 - Draft design
- Stage 3 - Detailed Design Existing Road.
- Stage 4 - Pre - opening
- Stage 5 - Existing road

The stage - 5 audit process applies to the evaluation of the transportation system, the Stage 2 and 3 audits apply to the proposed developments design and desirably the stage - 4 audit should be applied prior to the opening of the developer for public use.

When using the road safety audit process it is important to note that potential road safety issues are raised and that these issues need to have a risk assessment applied which relates to the existing system performance and probability of an event.

- **Traffic Impacts**

The traffic impacts of the proposed development should be assessed against the needs of all users of the transportation system with equal weighting given to the preservation of transport system efficiency, safety and user amenity. Impacts of traffic noise may also be required in sensitive areas where noise may be an amenity issue.

- **Suggested improvements**

Where improvements to the road system are identified their acceptance by the responsible road authority should be obtained and as appropriate relevant costing together with any formal commitment provided in the traffic impact assessment

- **Summary of findings**

All relevant traffic impacts from the proposed development should be included and be readily identifiable in a summary of findings. The summary should be concise, easy to read and understand. Where appropriate reference should be made to the relevant sections of the traffic impact assessment.

- **Outcomes**

Whilst the traffic impact assessment provides a valuable insight into the operational efficacy of the proposed development it also provides a valuable data source of the traffic and parking generation characteristics of various land uses. Invariably this data resource is lost once the development application has been processed and this loss precludes a valuable and cost effective measure of updating Schedule E of the Hobart Planning Scheme. It is therefore recommended that the data from each traffic impact assessment be recorded on a traffic and parking generation file for use in regular reviews, either for individual projects or Planning Scheme Schedule E updates.

The importance of traffic impact assessments, which must be undertaken by a qualified traffic engineer, for ensuring the safe and efficient use of the road system cannot be overstressed. It is therefore recommended that traffic impact assessments be included as a requirement for all development applications which are likely to impact on the efficacy of the road system.

## **Definition of Terms**

### **Performance Criteria**

Performance Criteria are general statements which establish the level of performance in respect to the relevant Principles of Parking and Movement. They are not meant to be overly limiting in nature. Instead, they provide designers and developers with an opportunity to develop a variety of design responses and provide a basis for Council in exercising 'discretion' in respect to a variation.

### **Acceptable Solutions**

Acceptable Solutions are provided as a bench mark of performance and an example of an acceptable means to achieve the Performance Criteria. They may not be appropriate in all instances.

### **6.2 Data Base**

It is also recommended that the data contained in this study and data accumulated by Council over time in relation to various development proposals and studies be recorded and maintained to provide a data bank for the future use of Council.

Appendix 1

**Table 1 - Car Space Provision**

Use Group	Defined Use	Category of defined use	Spaces required
<b>Residential</b>			
one	house / ancillary flat	small ( =<75m2 )	1
		medium ( = 75 m2 to 110 m2 )	1.25
		large ( => 110 m2 )	1.5
	home occupation		no additional requirement
one	elderly persons units	housing for the aged or disabled ( self contained units )	2 per 3 units + 1 per 5 units ( visitors )
four	domestic business		compliance with relevant standard for 'house' plus 1 space per non resident employee
three	multiple dwellings		subject to site survey

**Health & Community Services**

five	consulting rooms	professional consulting rooms	3 per surgery
		extended hours medical centres	4 per 100 m2 gfa.
five	community centre	child care centre other categories	1 per 4 children subject to traffic impact study
five	place of public worship		1 per 10 seats
six	hospital		subject to site survey
six	hospital outpatient facility		subject to site survey
six	welfare institution	hostels, nursing & convalescent homes	<ul style="list-style-type: none"> <li>• 1 per 10 beds ( visitors ) +</li> <li>• 1 per 2 employees +</li> <li>• 1 per ambulance</li> </ul>

**Education & Cultural Services**

seven	primary & second. schools		<ul style="list-style-type: none"> <li>• 2 per 3 staff +</li> <li>• 4 per visitors +</li> <li>• 3 bus parks</li> </ul>
	matric. college		<ul style="list-style-type: none"> <li>• 1 per 2 staff +</li> <li>• 1 per 20 students</li> </ul>
	tertiary institute		<ul style="list-style-type: none"> <li>• 1 per 2 staff +</li> <li>• 1 per 10 students</li> </ul>
seven	galleries, museums, libraries		1 per 80 m2

**Retail Offices & General Commercial**

eight	office		1 per 40 m2
nine	shop, local shop, bank	commercial premises	1 per 40 m2
		car retail outlets	( which ever is the greater of ) <ul style="list-style-type: none"> <li>• 3 per 100 m2 gfa, or</li> <li>• 3 per work bay</li> </ul>
		markets	2.5 per stall
		bulky goods retail stores	subject to traffic impact study
		video stores	6.1 per 100 m2 gfa
		Bottle Shops	<ul style="list-style-type: none"> <li>• at least 2 service lanes with a separate parking area for browse shoppers</li> <li>• precautions such as clear through lanes should be considered to reduce the</li> </ul>

Use Group	Defined Use	Category of defined use	Spaces required
			likelihood of vehicle queues extending onto the street
nine	takeaway food shop, supermarket	take away food shop ( no seating)  take away food shop (seating )  take away food shop ( seating & drive through facilities )	12 per 100 m2 gfa.  12 per 100m2 gfa + greater of 1 space per 5 seats ( internal & external ), or 1 per 2 seats ( internal )  <ul style="list-style-type: none"> <li>1 space per 2 seats ( internal ), or</li> <li>1 space per 3 seats ( internal and external)</li> <li>+ queuing area for 5 to 12 cars</li> </ul> specific provs.(+ normal requirements ) for -franchised outlets such as Macdonald's, Kentucky , Burger King etc. are 10 car lengths in drive through capacity however queue must be able to extend to 12 cars without disruption
		service stations & convenience store	6 per work bay + 5 per 100 m2 gfa of conven. store
		shopping centre / supermarket	gfa ( m2 ) spaces per 100 m2 gfa  0-10K            6.1 10 -20K        5.6 20-30K         4.3 over 30K        4.1

**Service Industry**

ten	holiday unit, motel	motel, holiday unit	1 per unit + 1 per 2 employees ( where function rooms &/ or restaurant included ) 15 per 100 m2 GFA of restaurant/ function room, or 1 per 3 seats, whichever is greater
ten		caravan parks	1 per caravan site
ten		bed & breakfast	1 for the owner + 1 per 2 beds
ten		hotel ( traditional )  hotel ( tourist )	subject to traffic impact study  <ul style="list-style-type: none"> <li>1 per 5 bedrooms ( 5 star international )</li> <li>1 per 4 bedrooms +</li> <li>2 coach lay-by spaces + 1 taxi lay-by space per 100 bedrooms ( 3&amp; 4 star )</li> </ul>
ten	club, cinema, theatre or restaurant	club, cinema or theatre	subject to traffic impact study



Use Group	Defined Use	Category of defined use	Spaces required
		restaurant	15 per 100 m2 gfa, or 1 per 3 seats, which ever is the greater
eleven	active recreation	marina	<ul style="list-style-type: none"> <li>• 0.6 per wet berth +</li> <li>• 0.2 per dry storage berth +</li> <li>• 0.2 per swing mooring +</li> <li>• 0.5 per employees</li> </ul>
		other uses	subject to traffic impact study
twelve	amusement machine centre, health studio (gym)	amusement machine centre	1 per 45 m2 gfa
		gymnasiums	3 per 100 m2 glfa

**Industrial**

thirteen	service industry or showroom		1 per 100 m2 floor area or 1 space per 2 employees which ever is greater
fourteen	light industry, warehouse or saleyard	factories	1.3 per 100 m2 floor area or 1 per 2 employees which ever is greater
		warehouse or saleyard	1 per 300 m2 gfa + 1 semi-trailer space
		motor showrooms	0.75 per 100 m2 site area + 6 per work bay ( if applicable )
fifteen	transport depot, timber yard or industry		1 per 2 employees

**Table 2 - Driveway Construction**

Table 2a Type - (refer table 2b)	Entry Width (Metres)	Exit Width (Metres)	Min. Driveway Separation (Metres)	Kerblines Splay (Metres)	Kerb Return Turn Out Radius (Metres)
1	3-6	combined	NA	0.5	-
2	6-9	combined	NA	1	-
3	6	4-6	1-3	1	2-9
4	6-8	6-8	1-3	1	2-9
5	Direct feed from a controlled intersection via a dedicated public roadway				
6	8-10	8-10	3	1	2-9
7	10-12	10-12	3	1	2-9

**Recommended Driveway Types**

Road Frontage	less than 25	25-100	101-300	301-600	more than 600	heavy vehicles
major	1-2	2-3	3-4	4	5	7
minor	1	1-2	2-3	3-4	4	6

**Table 3 Bicycle Parking Space Provision**

Use Group / Use Type	Employee - no. of spaces	Visitor - no. of spaces
3 / multiple dwelling	1 per 3 residences	1 per 12 residences
5 / consulting rooms	1 per 8 practitioners	1 per 4 practitioners
place of assembly/ community centre/ hall		1 per 150 m <sup>2</sup> gfa.
6 / hospital	1 per 15 beds	1 per 30 beds
7 / school	1 per 5 pupils over year 4	nil
tertiary institutions	2 per 100 full time students	nil
libraries	1 per 500 m <sup>2</sup> gfa.	4 + 2 per 200 m <sup>2</sup> gfa.
8 / office	1per 200 m <sup>2</sup> gfa.	1 per 750 m <sup>2</sup> gfa. where over 100m <sup>2</sup> gfa.
9 / shop etc	1 / 300 m <sup>2</sup> gfa.	1 / 500 m <sup>2</sup> where over 1000 m <sup>2</sup>
take away shop.	1 / 100 m <sup>2</sup> gfa.	1 / 50 m <sup>2</sup> gfa.
10 / tourist accom ( motel etc. )	1 / 40 rooms	nil
restaurant	1 per 100 m <sup>2</sup> gfa.	nil
13, service industry or showroom	1 per 100 m <sup>2</sup> gfa	nil
14 / light industry	1 per 1000m <sup>2</sup> gfa	nil

note : gfa = gross floor area

## References

- **General**

*A Model Framework for Planning Schemes*, Resource Planning and Development Commission September 1998.

*AUSTROADS Guide to Traffic Engineering Practice Pt. 5 Intersection at Grade* 1995.

*Australian Standard AS 2890.1 - Standards Australia* 1993.

*AMCORD - A National Resource Document for Residential Development* - Commonwealth Department of Housing & Regional Development 1995.

*Calvary Hospital Master Plan Review - Parking Report*, B. McNeil 1997.

*Census 1996 - Summary Tables* Australian Bureau of Statistics 1999.

*Clarence City Council Municipal Bicycle Plan 1997*. T. Peters & J. Douglas et al.

*Disability Discrimination Act* 1995.

*Hobart .. A Social Atlas*, Australian Bureau of Statistics 1997.

*Urban Transport*, Industry Commission, Melbourne 1993.

*University Parking Study*, R J Graham & Associates 1990.

*Making Access Happen - A Guide To Developing Disability Discrimination Act Action Plans For Local Government* Local Government Association of Tasmania 1997.

*Policies, Guidelines and Procedures for Traffic Generating Developments* Traffic Authority of NSW 1995.

*Residential Road Policy, Perth*, State Planning Commission, 1988.

*Review of Car Parking Provisions in Victorian Planning Schemes*, Victorian State Government 1996.

*Shared Parking*, The Urban Land Transport Institute 1988.

*RTA Guide to Traffic Generating Developments*, Issue 2.0, Roads & Traffic Authority NSW 1994.

*TASCORD Tasmanian Code for Residential Development*, Dept. of Environment & Land Management , Tasmania 1997.

*Transportation and Land Development*, Institute of Transportation Engineering, 1983.

- **Studies Commissioned by the Hobart City Council**

*Central Area Plan (CASP) Draft Strategy & Parking Topic report*, 1991.

*Frame District Parking Project* 1988.

*Hobart City Bike Plan* 1997.

*Hobart CBD Parking and Access Study, 1995.*

*Hospital parking Review Study, 1997.*

*Housing 2000, 1994.*

*Parking in Multi - Unit Developments, 1988.*

*Rescode - 95.*

*North Hobart Car Parking Investigation, 1993.*

*Study of the Area North of the CBD, 1998.*

*Sandy Bay Car Parking Investigation, 1993.*

*Sullivans Cove Traffic and Parking Management Study, 1994.*

- **Planning Schemes referred to**

Hobart - Battery Point, Sullivans Cove, Hobart City

Melbourne

Glenorchy

Brisbane

Launceston

Toowoomba

Devonport

Sydney

Burnie

Tee Tree Gully

Geelong

Adelaide