5. PARKING BUILDING INFORMATION SIGNS

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The purpose of this report is to discuss the proposed introduction of an improved method of signposting to influence the route taken by motorists travelling to the various parking buildings located in the Central City. The report introduces the project, identifies issues and seeks approval for the direction for the project. Accurate, relevant and timely parking information can encourage motorists to make informed travel choices, reduce the impact of unnecessary travel and add to the effective use of the City's infrastructure.

The Council has allocated $300,000 in the Transport and City Streets Unit's budget for the 2003/04 financial year to improve the facilities for motorists travelling to and from the parking buildings. In the past the Council has provided limited information at a selected number of parking complexes. The Transport and City Streets Unit and Sustainable Transport and Utilities Committee have continued to support the need to provide motorists with information that is timely, positive, will minimise congestion and reduce vehicle travel. On-street queuing is an acute problem, during peak periods, at a number of City parking buildings, which has further highlighted the need for improvement.

PARKING SIGN INFORMATION OBJECTIVES

There are a wide range of signs and road markings, which can be used to convey information to the driver. The systems proposed in this report are designed to achieve the following objectives:

- Provide user-friendly information,
- Encourage the use of off-street parking facilities,
- Enhance the central city image,
- Reduce queues of vehicles outside the different parking complexes,
- Encourage better driving through route planning,
- Reduce vehicle travel and hence reduced noise and atmospheric pollution.

Some studies have shown that the average distance to find a park can be reduced by up to 30% through the use of a parking guidance system. Similarly participating parking facilities do benefit in the use of their facilities. Studies elsewhere have shown increased occupancies of up to 15% have been achieved. This has resulted in a direct increase in parking revenues.

SIGN INFORMATION SYSTEMS

There are numerous systems that can be used to convey messages to the motoring public. Presently, there is little information presented at the various Council car park buildings of their state and characteristics. There are various signs indicating their position, name of the complex, if the first hour is free or if they are full. However, the standard is not consistent nor is the information of a clear style and therefore is not fully effective. All Council car parks within the Central area have illuminated "FULL" signs. These signs have not always been effective and have been augmented at times by sandwich board signs on the footpath.

The only other specific parking signs are those remote from the individual parking building or off-street sites and relate to solely parking direction and location.

These signs generally consist of the standard blue 

signs. The ability to provide motorists with early information of where parking is available has the potential to allow motorists to make changes to their intended route and to avoid areas of congestion. There are numerous systems possible and three possible systems have been considered as being potentially appropriate for Christchurch.

These parking systems, which are outlined below, are designed to target those parking buildings where the principal activity is short-term public parking, where the building is located in the Central Area.

- **Scheme A: Targeted Parking Buildings and some Central City Approaches**

  Scheme A is focused on only two or three parking buildings where there is parking congestion and alternative parking is available in close proximity to this site. Three buildings in particular could be considered as being appropriate, ie Lichfield, Oxford and Farmers car parks. A study of the direction of arrival of parkers at the Lichfield car park complex indicate that some 40% arrive via Oxford Terrace from areas to the south-west and 25% from the north-west, most of whom travel via Durham Street. A similar percentage could be assumed for the Farmers and Oxford Terrace car parks. Thus this sign system would only cater for some 65% of users.

  Signs would be erected on two approaches indicating the number of spaces available in each complex. The signs would be located at varying distances depending on the route to be taken. One sign would be located on Cambridge Terrace near Antigua Street and the other on Durham Street near Chester Street. A disadvantage of this scheme is its ability to expand to other parking buildings, the different approaches and the ability to grow in a planned and coordinated manner.

- **Scheme B: The Four Main Approaches**

  This system proposes to indicate the different parking complexes as motorists approach the inner pairs of one-way streets. Signs would be installed, as motorists are about to enter the central area. This scheme is a development of Scheme A to include all parking complexes.

  The disadvantage of this approach is that motorists who approach the Central City on other streets than the inner one-ways will not be informed of the parking situation, eg Victoria Street. This system is also reliant upon motorists being knowledgeable about the central city layout.

- **Scheme C: The Parking Route to the Central City**

  This scheme is a development of the above two schemes and the original parking search scheme. This option is also focused around the inner one-way streets but uses these streets to develop a 'search route'. Thus Madras Street, Kilmore Street, Durham Street and Lichfield Street are defined as the parking search route and used to inform motorists of the availability of parking spaces on each side of the Central City. This 'search route' is identified on all approaches to the Central City and once motorists are on that route they are informed of the parking situation as they approach that side of the Central City. Dynamic signs are the located within this search route advising of the availability of parking spaces. A diagram of the search route and sign location is attached to this report as Appendix A. The system is a useful indicator to give definition to the central area.

  An example of the information that could be placed on each sign is illustrated for the Durham Street approach. This example includes either a single static display or one that could be fully dynamic.

Durham Street	Principal Notification		Secondary Notification	
	West Side		South Side	No _____
	Farmers	No _____	Lichfield	No____
	Art Gallery	No _____	Crossing	No____
	Oxford Terrace	No _____	Cashel	No____.

TYPES OF SIGNS

Signs that provide indicator information on parking availability use a range of indicators to show the current status or availability and direction of parking spaces. Examples of indictors include the following sign technologies;

- Variable Message Sign (VMS),
- Smart Indicator Elements (Smart P),
- Changeable Sign (CMS).

These signs, which are illustrated in Appendix B (attached), use standard communication techniques to indicate the status of the various carparks. With the (VMS) sign the display is fully variable. A (CMS) includes some limited variable information such as number of empty spaces and some directional with a fixed format. The (smart P) is similar, but the number of spaces is indicated with a status bar usually with two colours (red and green) to indicate whether it is full or there are spaces available. In some cases three colours are used.

The advantage of a (CMS) sign is that it is easier to read but lacks the flexibility to deal with changes. The (Smart P) sign is a refinement of this type of sign and is not number dependant.

A fully variable sign usually consist of three to four lines with provision for up to 18 characters a line. Each individual character would be in upper case and a standard 5x7 led display is used to indicate each individual letter or number. These signs have a more finite life, can be subject to different lighting levels but can include a range of different message such as 'car park' or 'road closed' or 'detour'. While traffic information messages such as 'Accident - Madras Street' would be useful, the use of the sign for other purposes eg 'fasten your safety belt' should be avoided as they detract from the use of the sign as a parking sign.

OTHER FACTORS

Work undertaken in developing this report to date has also identified the following factors, which could require further attention;

- System operation cost,
- Standard parking building entrance treatment,
- Promotion cost.

Initial discussions have been undertaken with Wilson Parking. The concept to improve the standard and level of signposting has been favourably received. They are supportive and prepared to play their part in providing funds and information to support a dynamic system. Details, standards and costs have yet to be taken to the next stage, but will be following the Council's approval in principle to a preferred scheme.

COSTS

The cost of the various sign systems will vary depending upon whether the signs are fixed or variable and to the level that the search route is delineated. Initial estimate range from $180,000 to $320,000. Detailed cost estimates will also depend on the support from other system users.

CONCLUSION

Scheme C (that includes the search route) is the preferred option.

Staff Recommendation:

1. That Scheme C form the basis of an improved parking information system for the Central City of Christchurch.

2. That detailed cost estimates are prepared.

3. That a review of the individual parking building entrances is carried out.

Chairman's Recommendation: That the above recommendation be adopted.