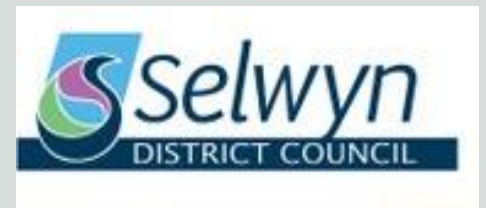


Lincoln Town Centre Parking Survey



Lincoln Town Centre Parking Survey

Selwyn District Council

Quality Assurance Information

Prepared for: Selwyn District Council
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Date issued	Status	Approved by
		Name
20 April 2015	Draft	Jeanette Ward
12 May 2015	Second draft	Jeanette Ward
18 May 2015	FINAL	Jeanette Ward

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Executive Summary

Introduction

A parking survey of the Lincoln Town Centre was undertaken on Thursday 26 March 2015 from 8:30 to 5:30pm to collect and analyse existing parking patterns. Thursday is generally accepted in the transport profession as being the most representative day of the working week to complete surveys. No surveys were undertaken at the weekend or during special events where demand will differ from a weekday.

The purpose of the survey was to better understand the level of parking occupancy and turnover in the town centre to inform the development of the Lincoln Town Centre Plan. It also allowed a comparison with a parking survey undertaken in 2010. The existing parking supply within the study area is shown in the table below.

Lincoln Town Centre Parking Inventory and Restrictions

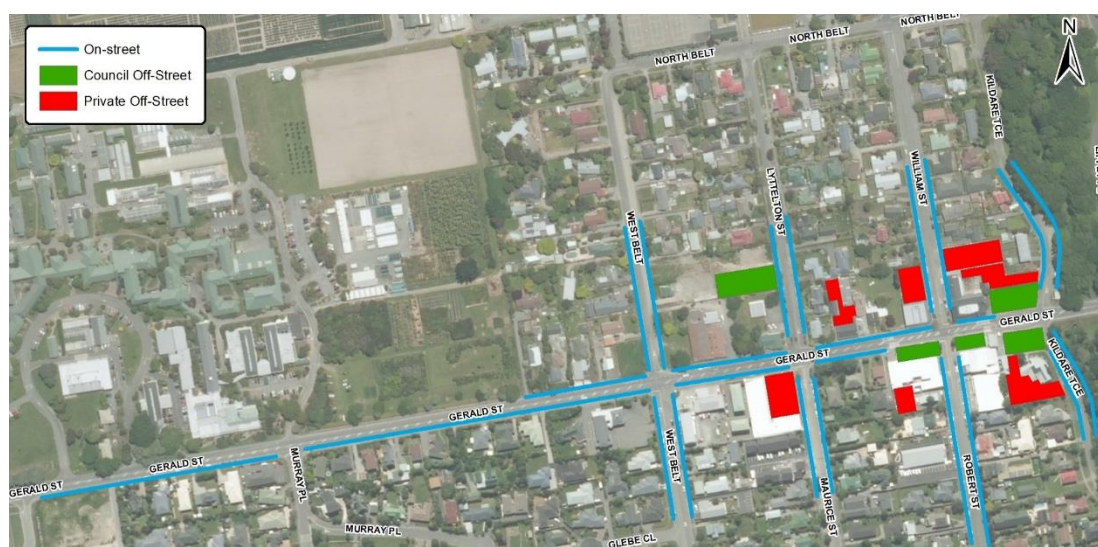
Parking Area	No Restriction	P5	Disabled	Total
On Street	306	2	1	309
Off Street - Council	76	0	9	85
Off Street - Private	118	0	6	124
TOTAL	500	2	16	518

The majority of parking spaces (96.5%) within the study area are not subject to a time or class restriction. Approximately 99% of all on-street car parking spaces in the study area are unrestricted with the remaining 1% subject to a time or class restriction. Similarly, a high proportion of off-street parking spaces (93%) are unrestricted with 7% of parking spaces located for disabled parking.

The Lincoln Library off-street car park was partially formed at the time of the survey and the remaining area of the car park was still under construction. The carpark currently provides 30 car parking spaces including four disabled parking spaces. It should be noted that the car park when fully formed will provide 62 car parking spaces in total and include the area to the west boundary of the existing formed car park to West Belt.

The survey established parking occupancy and duration of stay. Parking occupancy is expressed as a percentage and is calculated as the number of spaces occupied divided by the total number of spaces available. 80% to 85% is the optimum occupancy range, occupancies higher than 85% create difficulties for motorists searching for a car parking space. The parking occupancy ranges are in line with international best practice for parking management and appropriate for Lincoln Town Centre.

Extent of the Lincoln Town Centre Parking Survey



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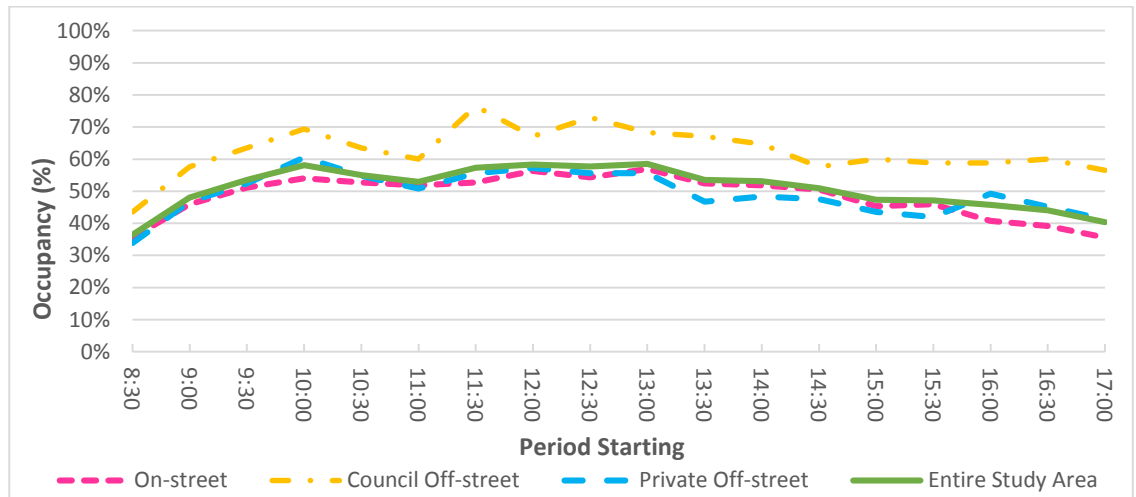
Lincoln Town Centre Parking
Survey Report - Final.docx

Issue Date:

18 May 2015

Parking Occupancy

Parking
Occupancy across
the entire day on
Thursday 26
March 2015



The figure above shows that the **average occupancy in the entire study area**, when combining on-street and off-street parking areas, across the 9 hour survey period was 51%. Council off-street parking was most demanded with 63% of parking spaces being occupied on average compared to 49% in private off-street and on-street parking areas. The average occupancy was observed to be between 50% and 60% from 10am to 1:30pm and **peaked at 58.5% between 1:00pm and 1:30pm**. The peak 30-minute occupancy was also higher in Council owned off-street parking areas (68%) when compared to private off-street (56%) and on-street (57%) parking areas.

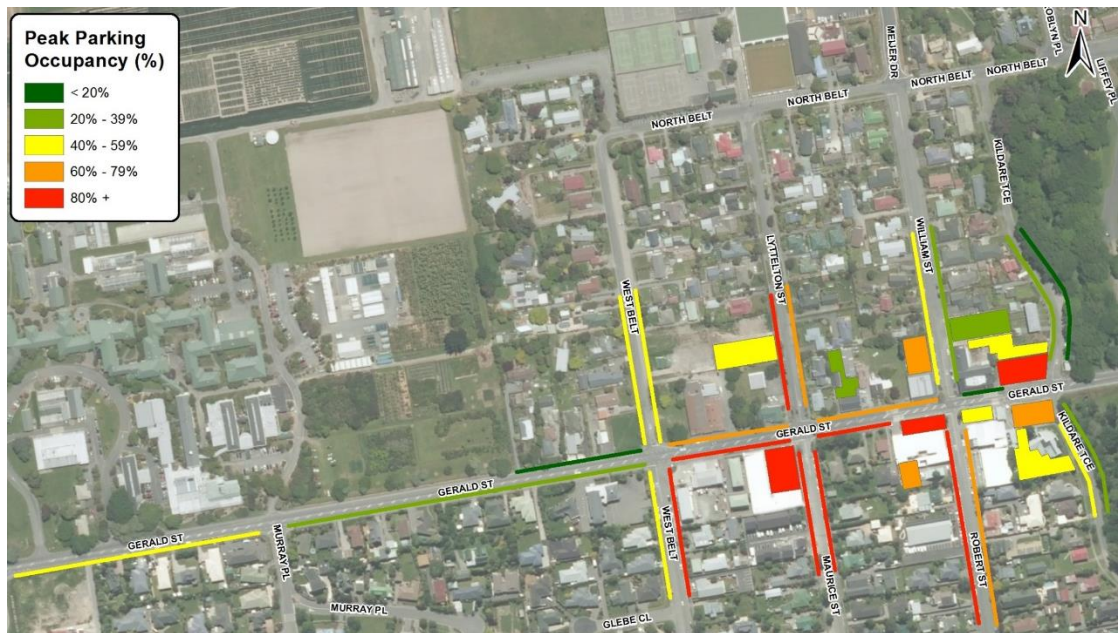
The following figure shows that the average parking occupancy, throughout the survey period, on Gerald Street between West Belt and Kildare Terrace is generally higher when compared to the average parking occupancy on Gerald Street west of West Belt.

Average Parking
Occupancy
(8:30am to
5:30pm), Thursday
26 March 2015



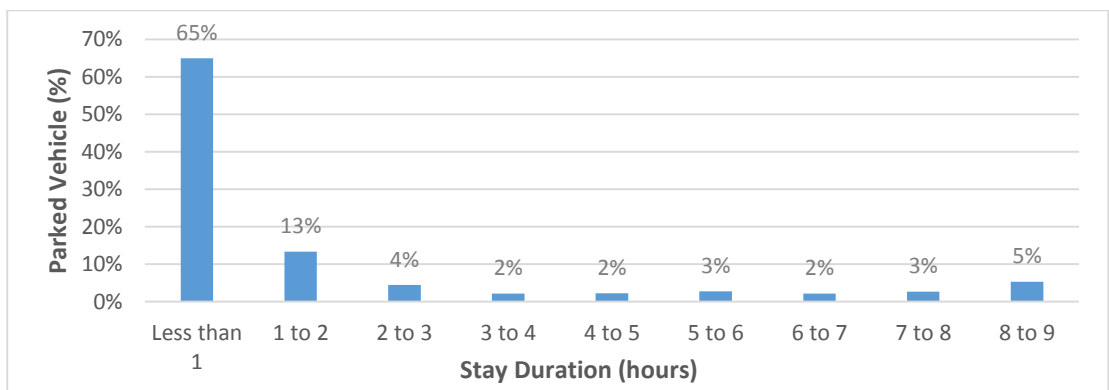
The following figure shows that the peak 30-minute parking occupancy (1:00pm to 1:30pm) on Gerald Street at the core of the town centre was also higher than the parking occupancy on Gerald Street west of West Belt. The parking occupancy in some Council owned off-street parking areas and in a private off-street car park (Lincoln Vale car park) were very high, exceeded 80% occupancy during the peak 30-minute parking occupancy. Meanwhile, a total of five on-street parking areas also exceeded 80% occupancy and another two on-street parking areas reached 80% occupancy during the peak 30-minute period.

Peak Parking Occupancy ((1:00pm to 1:30pm), Thursday 26 March 2015



Duration of Stay

Parking Duration of Stay in All On-street and Council Owned Parking Areas

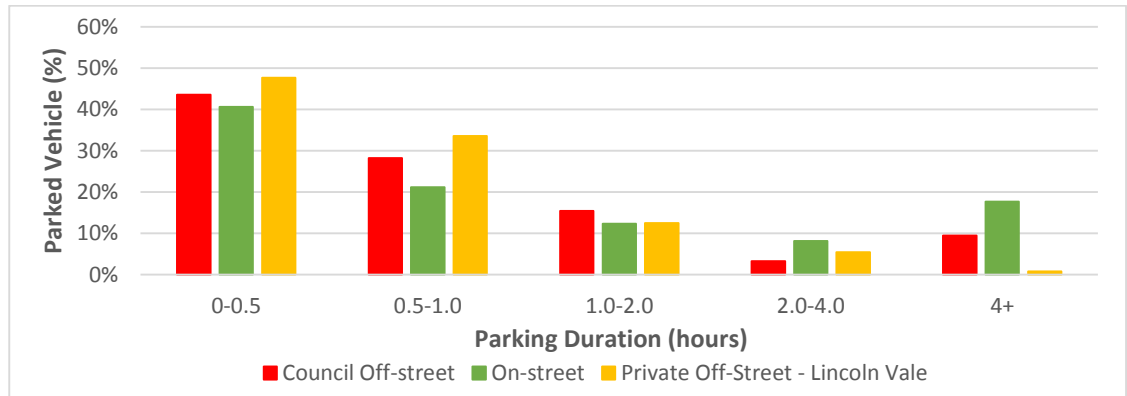


The figure above shows that 65% of all vehicles parked in on-street and in Council owned off-street parking areas stayed for less than one hour and 78% of all vehicles stayed for less than 2 hours. **Short stay parking is generally associated with customers of adjacent businesses.** Approximately 85% of all vehicles parked in the study area stayed for less than 4 hours with the remaining 15% parked for more than 4 hours.

The longer duration of stay (more than 4 hours) tends to occur in on-street parking areas in side streets (18%) when compared to 10% in Council owned off-street parking areas. **Longer stay parking is likely to be predominantly staff and residents in on-street areas, and mainly associated with staff parking in off-street parking areas.**

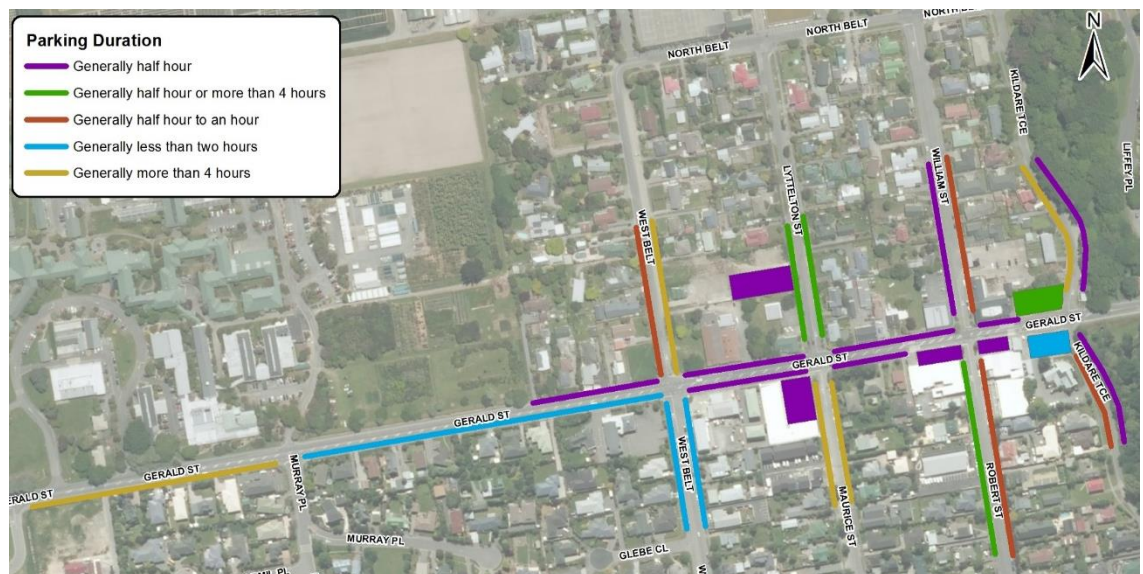
The following figure shows the majority of vehicles (94%) parked in the private off-street car park (Lincoln Vale) stayed for less than 2 hours. This indicates that the car park is likely to be predominantly used by customers visiting the businesses in Lincoln Vale.

Parking Duration of Stay by Area



The majority of vehicles parked in Council owned off-street parking areas tend to stay for less than 30 minutes. However, the following figure shows the general duration of stay for parking in the Council owned off-street parking area at the northwest corner of Kildare Terrace and Gerald Street was for more than 4 hours. This area is close to the bus stops located on Gerald Street between Kildare Terrace and Williams Street so likely to be used by bus users as a park and ride type scenario rather than for staff parking. The adjoining hotel has its own off-street parking area and had low average occupancy throughout the survey period.

General Duration of Stay within Each Area



The duration of stay for all parking on Gerald Street is generally less than 30 minutes. The exception to this is the parking on the south side of Gerald Street west of West Belt where most of the vehicles generally stayed for less than two hours or for more than 4 hours.

Comparison with Previous Survey

A parking survey was undertaken in 2010¹. The survey area was smaller and does not correspond exactly with the 2015 survey. However, several key comparisons between the parking occupancy and duration of stay then and now include:

- Parking demand in 2010 generally occurred within the business zone area in the town centre (Gerald Street from Kildare Terrace to West Belt including part of the side streets closest to Gerald Street) and this is consistent with the 2015 survey findings.
- Parking on grass berms occurred on West Belt and this is consistent with the 2015 survey findings
- The predominant use of side streets is for all day parking and parking for several hours. This is generally consistent with 2015 parking turnover survey showing the longer duration of stay parking (more than 4 hours) tends to occur in on-street areas.
- There is a high proportion of all-day parking in the Council owned off-street car park at the northwest corner of Kildare Terrace and Gerald Street. This is consistent with the relatively high proportion of vehicles (33%) observed staying for more than 4 hours in the 2015 parking survey.
- The 2010 survey shows that the bulk of the shorter term parking (less than 30 minutes) occurred in the Council owned off-street parking areas located at the southwest and southeast corner of Gerald Street and Robert Street intersection. The 2015 survey results are consistent with the 2010 survey with the majority of vehicles parked in these areas stayed for less than 30 minutes.
- The 2010 parking survey also shows that the parking in the Council owned parking area in front of the medical centre was for less than 30 minutes. The 2015 parking survey shows that the general duration of stay was longer with the majority of vehicles parked for less than 2 hours.

Parking Management Plan

The results of the survey will inform the development of a Parking Management Plan for Lincoln Town Centre. This plan will ensure that the supply and management of parking is provided in an economically, environmentally and socially sustainable manner, and will recommend a range of parking management tool to achieve this. Examples of parking management methods include time restrictions, search routes and improving user information.

¹ Viastrada Limited (May 2010) *Lincoln Township Parking Study*

Contents

<i>1.</i>	<i>Introduction</i>	<i>1</i>
<i>1.1</i>	<i>Background</i>	<i>1</i>
<i>1.2</i>	<i>Scope of Study</i>	<i>1</i>
<i>2.</i>	<i>Parking Inventory</i>	<i>2</i>
<i>2.1</i>	<i>Parking Supply</i>	<i>2</i>
<i>2.2</i>	<i>Parking Restrictions</i>	<i>4</i>
<i>3.</i>	<i>Survey Methodology</i>	<i>6</i>
<i>4.</i>	<i>Survey Results</i>	<i>7</i>
<i>4.1</i>	<i>Parking Occupancy</i>	<i>7</i>
<i>4.2</i>	<i>Parking Turnover</i>	<i>13</i>
<i>5.</i>	<i>Summary of Key Findings</i>	<i>18</i>

1. Introduction

1.1 Background

The Selwyn District Council commissioned Abley Transportation Consultants Limited (Abley) to undertake a parking survey in the Lincoln Town Centre. The purpose of the survey was to better understand the level of parking occupancy and turnover in the town centre to inform the development of the Town Centre Plan.

The results of the survey will inform the development of a Parking Management Plan for Lincoln Town Centre. The parking management plan will ensure that the supply and management of parking is provided in an economically, environmentally and socially sustainable manner, and will recommend a range of parking management tool to achieve this. Examples of parking management methods include time restrictions, search routes and improving user information.

1.2 Scope of Study

The study area was divided into two observation zones as shown in **Figure 1.1**. The findings of the report are based on a survey undertaken on 26 March 2015. It should be noted that parking occupancy and turnover will vary by day of the week and time of the year. This report provides an overview of an existing 'typical day' parking occupancy and turnover. The parking study area did not extend to the western extent of the Lincoln Town Centre key activity centre as there is no on-street parking on Gerald Street west of Vernon Drive.

Figure 1.1 Lincoln Town Centre Parking Observation Zones



2. Parking Inventory

2.1 Parking Supply

A site investigation was carried out on 19 March 2015 to count the number of car parking spaces within the study area and to record any parking restrictions. In on-street areas with unmarked parallel parking spaces the supply was estimated by measuring the kerb length, excluding driveways and dividing by six (where 6m represents a standard length required to accommodate a parallel parked vehicle including manoeuvring space). Parking supply in unmarked off-street parking areas was also estimated.

It should be noted that the majority of on-street parking spaces on side streets are unmarked and in some cases parking occurs on grass berms. It was noted that parking in some on-street areas with unmarked parking spaces and with wide shoulders or grass berms, a combination of parallel parking and angle parking was occurring as shown in **Figure 2.1**. The parking supply for these areas have been increased to represent the existing parking patterns. Therefore, it should be noted that the level of parking provision may be lower than that recorded for the purpose of this survey should the kerb side parking be marked in the future.

Figure 2.1 Parking on West Belt north of Gerald Street (26 March 2015)



The parking areas within the study area are classified by three types: on-street, Council owned off-street and privately owned off-street. These are geographically shown in **Figure 2.2**. The number of parking spaces available within the study area are categorised by parking restriction as shown in **Table 2.1**

Table 2.1 Lincoln Town Centre Parking Inventory and Restrictions

Parking Area	No Restriction	P5	Disabled	Total
On Street	306	2	1	309
Off Street - Council	76	0	9	85
Off Street - Private	118	0	6	124
TOTAL	500	2	16	518

Table 2.1 shows the majority of parking spaces in the study area are provided on-street. On-street parking comprises approximately 60% of the total parking supply in the study area. This proportion would be lower if the smaller privately owned off-street car parking areas were included in the study.

It was noted that the Lincoln Library off-street car park was partially formed at the time of the site investigation and the remaining of the car park was still under construction. The carpark currently provides 30 car parking spaces including four disabled parking spaces. It should be noted that the car park when fully formed will provide 62 car parking spaces in total and include the area to the west boundary of the existing formed car park to West Belt. The car park also services the community centre located immediately to the north of the parking area.

Figure 2.2 Lincoln Town Centre Parking Areas



2.2 *Parking Restrictions*

The majority of parking spaces (96.5%) within the study area are not subject to a time or class restriction. Approximately 99% of all on-street car parking spaces in the study area are unrestricted with the remaining 1% subject to a time or class restriction. There are only two on-street parking spaces, located on Robert Street, in the study area which are subject to a time restriction (P5).

Similarly, a high proportion of off-street parking spaces (93%) are unrestricted with 7% of parking spaces located for disabled parking. **Figure 2.3** shows the existing parking restrictions in the study area. There are no parking charges applied to public and off-street car parking in the town centre.

Figure 2.3 Indicative Existing Parking Restrictions



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Survey Report - Final.docx

Issue Date:

18 May 2015

3. *Survey Methodology*

The 2015 Lincoln Town Centre parking demand and duration of stay survey was undertaken on Thursday 26 March 2015 between the hours of 8:30am and 5:30pm. Thursday is generally accepted in the transport profession as being the most representative day of the week to complete surveys.

The survey involved the recording of parking demand in the following locations:

- All on-street parking spaces within the study area;
- Council owned off-street car parking areas; and
- Large privately owned off-street car parks.

The duration of stay for vehicles parked in on-street areas, Council owned off-street parking areas and in a private off-street car park (Lincoln Vale) were recorded. It should be noted that only parking occupancy was recorded for all parking in private car parks and duration of stay was only recorded for parking in one private car park (Lincoln Vale) and not recorded in all other private off-street parking areas.

The process used to record parking demand and calculate duration of stay was as follows:

- The study area was divided into two zones as shown in **Figure 1.1**.
- A surveyor was assigned to record parking demand within each zone on a 30 minute cycle, with the first circuit commenced at 8:30am and last circuit commenced at 5:00pm. Surveyors were instructed to complete each circuit in the same direction so that each parking space was observed every 30 minutes.
- Parking areas within each zone were identified and demand for each area recorded separately, as shown in **Figure 1.1**.
- Where a parking space was occupied by a vehicle, the surveyor was instructed to record the number plate of the vehicle, except in privately owned parking areas where only occupancy was recorded.
- The recording of a number plate for each circuit enabled the duration of stay to be calculated within 30 minute intervals.
- Vehicles that were in the process of leaving or had just arrived (occupants still departing the vehicle) into a parking space were not recorded by the surveyor.
- The data was entered into a spreadsheet and statistics including occupancy and duration of stay were extracted for the entire study area and specific areas of interest.

4. Survey Results

The survey established parking occupancy and duration of stay, and also enabled compliance with time restrictions to be determined. The number of parking spaces occupied across the day for each 30-minute period is included as **Appendix A**.

4.1 Parking Occupancy

Parking Performance

Parking occupancy is expressed as a percentage and is calculated as the number of spaces occupied divided by the total number of spaces available. To assist understanding of parking occupancy it is necessary to quantify the parking performance. The results of the occupancy survey have been assessed using the performance definitions as shown in **Table 4.1**.

Table 4.1 Parking Performance Relative to Occupancy

Occupancy	Definition	Consequence
80% +	Traffic circulation will be high as motorists 'hunt' for an available car park and motorists may not be able to find an available car park space at all. Parking infringements may be widespread and illegal parking common.	80 % - 85 % is the optimum occupancy range ² . Higher than 85% occupancies create difficulties for motorists searching for a car park.
60% - 79%	May be difficult to find a car park immediately and some parking circulation may be required to find an available car park. A park is unlikely to be found immediately outside the motorist's destination. Parking infringement is common although illegal parking is infrequent.	Utilisation slightly lower than optimum however occupancy rates in this range do not provide poor outcomes.
40% - 59%	High probability that a motorist will be able to find an available car park with ease. Vehicle circulation might be necessary to find a car park very close to the motorists' destination. Parking infringements will generally be low, illegal parking uncommon.	In priced areas parking prices may be too high or time restrictions are too short. Measures should be taken to encourage better utilisation in areas where several activities can be accessed using on street parking.
20% - 39%	Easy to find a car park close to the motorists' destination, vehicle circulation is unlikely to be necessary to find a car park very close to the motorists' destination.	Inefficient use of space. It may be appropriate to allocate land used for parking to other travel modes/ activities or review time restrictions.
<20%	Very easy to find an available car park and it will be very close to the motorists intended destination. Vehicle circulation will not be required to find an available car park very close to motorist's destination.	Severely under-utilised parking. Land resources could be better allocated to a different activity / mode e.g. wider footpaths or landscaping. If priced, prices may be set too high or restrictions may be inappropriate for the surrounding activities.

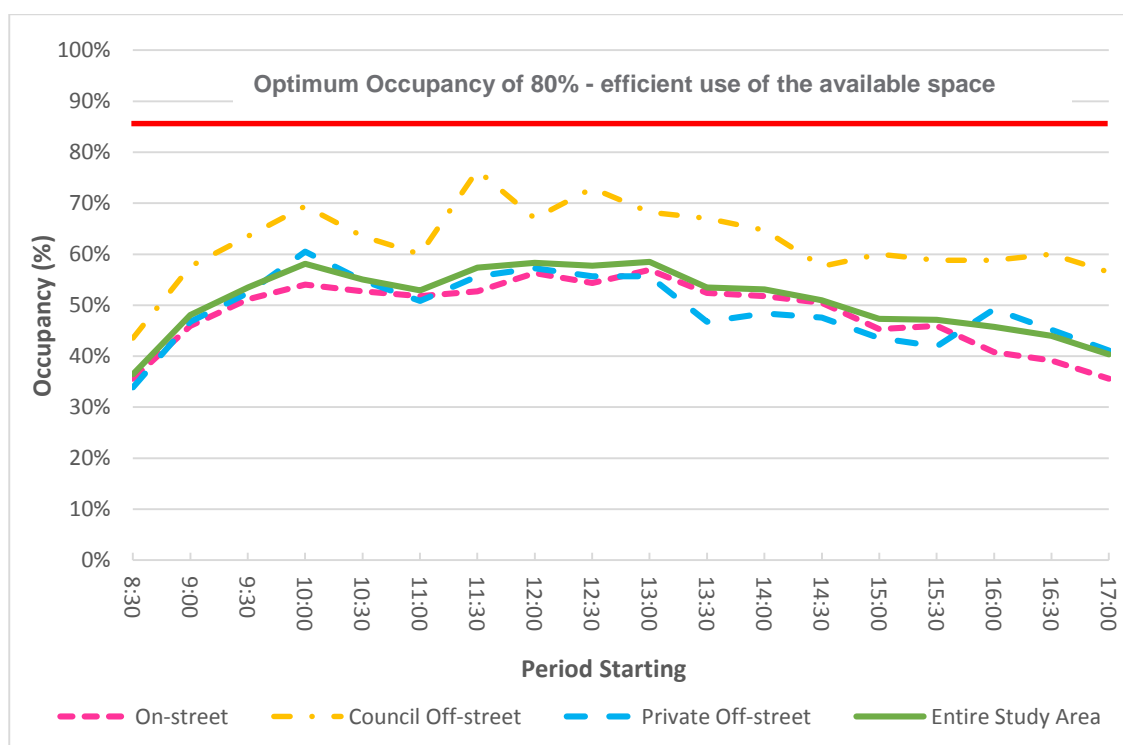
² 85% is considered to be an optimal 'peak' parking occupancy from "Parking Management Strategies, Evaluation and Planning" T. Litman, *Victoria Transport Policy Institute*, (2012).

The parking occupancy of an individual vehicle will differ depending on the occupancy level in the area in which the vehicle is trying to park. High occupancy levels generally correspond to difficulty in finding a parking space.

Overall Occupancy

The number of vehicles parked within the study area are classified by three types; on-street, Council owned off-street and privately owned off-street. The average occupancy for each of these parking types throughout the survey period is shown in **Figure 4.1**. **Figure 4.1** also includes an 'entire study area' parking occupancy across the survey period which is a combination of all on-street and off-street parking spaces in the study area.

Figure 4.1 Parking Occupancy across the entire day



Key findings from **Figure 4.1** include:

- The occupancy in the study area, when combining the results of on-street and off-street parking areas, was between 50% and 60% from 9:30am to 3:00pm and peaked at 58.5% between 1:00pm and 1:30pm.
- Parking occupancy in Council owned off-street parking areas is higher than the observed parking occupancy in on-street and private off-street parking areas throughout the survey period.
- The parking occupancy in Council owned off-street parking areas was observed to be continuously over or at 60% from 9:30am to 2:30pm and peaked at 76.5% between 11:30am and 12:00pm;
- On-street parking spaces were observed to be continuously over 50% occupied from 9:30am to 3:00pm. The peak parking occupancy in on-street parking areas peaked at 57% between 1:00pm and 1:30pm;
- Parking occupancy in private parking areas was observed to be continuously over 50% from 9:30am to 1:30pm and peaked at 60.5% between 10:00am and 10:30am; and

- The overall parking occupancy in the study area, when combining all on-street and off-street parking spaces, was observed to be over 50% occupied between 9:30am to 3:00pm.

Average occupancy throughout the survey period in each of the two survey zones (as shown in Figure 1.1) is given in Table 4.2 and geographically represented in Figure 4.2. Table 4.2 also includes the peak 30-minute occupancy observed between 1:00pm and 1:30pm and geographically represented in Figure 4.3.

Zone 1 is the parking to the north of Gerald Street (including the parking on the north side of Gerald Street) and Zone 2 is the parking to the south of Gerald Street (including the parking on the south side of Gerald Street).

Table 4.2 Peak 30-minute (1:00pm to 1:30pm) and Average (8:30am to 5:30pm) Parking Occupancy

Zone	On-street		Council Off-street		Private Off-street		Overall (On-street and Off-street)	
	Peak	Average	Peak	Average	Peak	Average	Peak	Average
1	48%	42%	63%	55%	43%	32%	50%	42%
2	64%	54%	76%	74%	70%	70%	67%	60%
Total	57%	49%	68%	63%	56%	49%	58%	51%

Table 4.2 shows that the overall average parking occupancy across the 9 hour survey period is 51%. Council off-street parking is most demanded with 63% of parking spaces being occupied on average compared to 49% in private off-street and on-street parking areas.

The overall peak 30-minute occupancy from 1:00pm to 1:30pm is 58.5%. The peak 30-minute occupancy is also higher in Council owned off-street parking areas (68%) when compared to private off-street (56%) and on-street (57%) parking areas.

Table 4.2 also shows that the average parking occupancy throughout the survey period and during the peak 30-minute is typically higher in Zone 2 when compared to Zone 1, and private off-street parking tends to be less utilised than Council owned off-street parking across all zones.

Figure 4.2 and Figure 4.3 show that the average and the peak parking occupancy tend to be lower in on-street parking areas near the fringe of the town centre. The average parking occupancy exceeded 80% with 84% occupancy in two on-street parking areas (West Belt and Maurice Street). It also shows that parking occupancy in off-street parking areas south of Gerald Street is generally higher than the parking occupancy in off-street parking areas north of Gerald Street.

Figure 4.3 shows that the parking occupancy in some Council owned off-street parking areas and in a private off-street car park (Lincoln Vale car park) were very high, exceeded 80% occupancy during the peak 30-minute parking occupancy. The parking occupancy in Council owned parking areas at the northwest corner of Gerald Street and Kildare Terrace intersection and at the southwest corner of Gerald Street and Robert Street intersection was 86% and 91% respectively. Meanwhile, a total of five on-street parking areas also exceeded 80% occupancy during the peak 30-minute period. The parking occupancy on the south side of Gerald Street between Maurice Street and West Belt was 90% and the occupancy at Maurice Street south of Gerald Street was between 91% and 100%. The parking occupancy on the western side of Robert Street south of Gerald Street and the western side of Lyttelton Street north of Gerald Street also exceeded 80% with 88% and 83% occupancy respectively. Another two on-street parking areas reached 80% occupancy during the peak 30-minute period. These include the south side of Gerald Street between Maurice Street and Robert Street and the eastern side of West Belt south of Gerald Street.

The average parking occupancy Gerald Street between West Belt and Kildare Terrace is generally higher when compared to the average parking occupancy on Gerald Street west of West Belt. The peak 30-minute parking occupancy also shows that the peak 30-minute parking occupancy on Gerald Street at the eastern end of the town centre was higher than the parking occupancy on Gerald Street at the western end of the town centre.

It is noted that the highly occupied spaces on side streets are up to 200m walking distance from the centre of Gerald Street. Although we cannot categorically state that the spaces are occupied by the people accessing the Gerald Street business it does indicate that people may be prepared to walk up to 200m between their parked vehicles and their destination.

Comparison with Historical Parking Demand – 2010

A parking survey was also undertaken in April 2010 (ViaStrada). It should be noted that the parking survey was undertaken prior to the 2010/11 earthquakes and the study area is slightly different compared to the 2015 Lincoln parking survey. The 2010 parking survey did not include Gerald Street west of West Belt. However, several key comparisons of on-street parking patterns include:

- **Parking demand in 2010 generally occurred within the business zone area in the town centre (Gerald Street from Kildare Terrace to West Belt including part of the side streets closest to Gerald Street) and this is consistent with the 2015 survey findings as shown in [Figure 4.2](#) and [Figure 4.3](#).**
- **Parking on grass berms occurred on West Belt, this is consistent with the 2015 survey findings as shown in [Figure 2.1](#).**

Figure 4.2 Average Parking Occupancy (8:30am to 5:30pm)

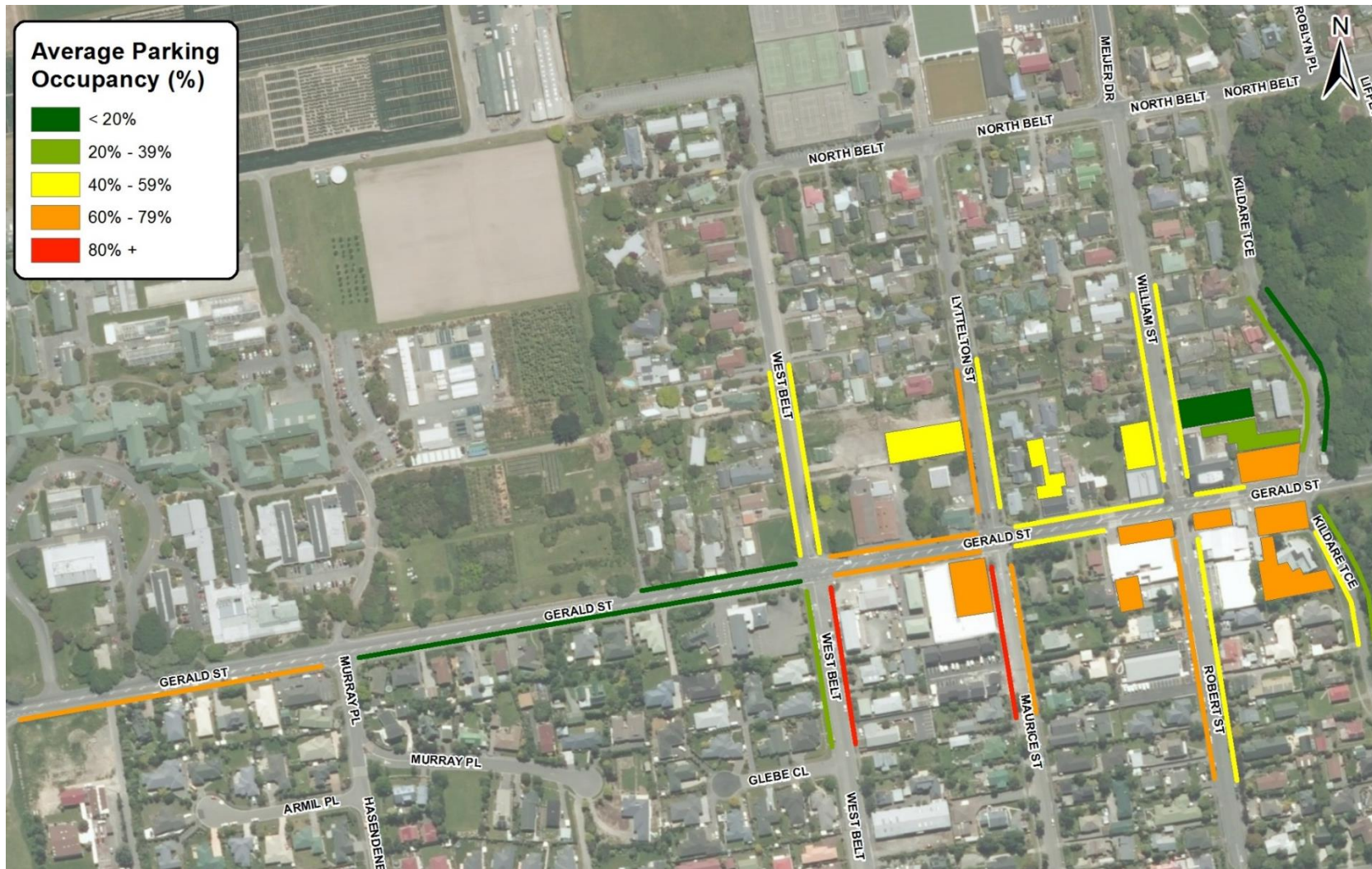
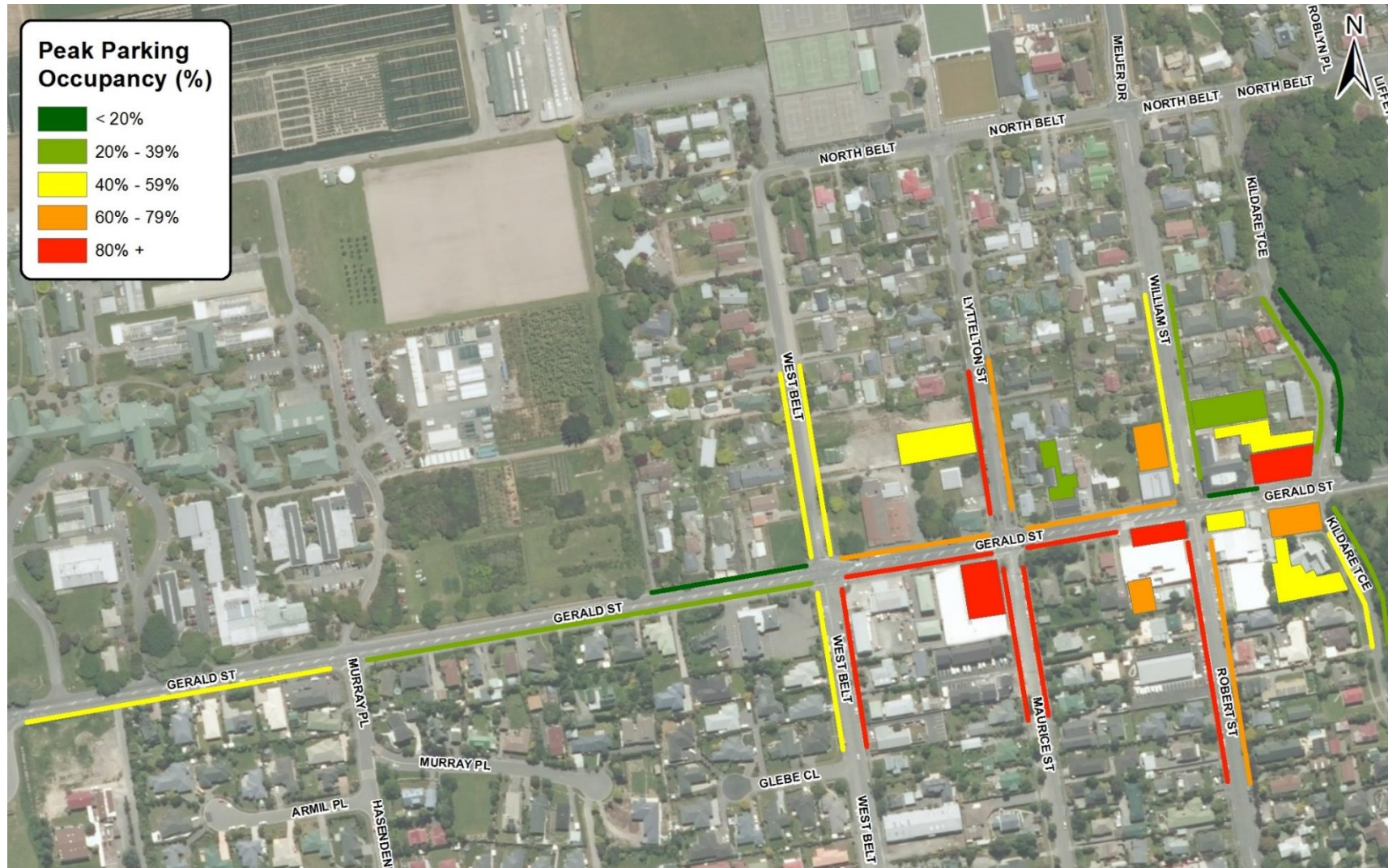


Figure 4.3 Peak 30-minute Parking Occupancy (1:00pm to 1:30pm)



4.2 Parking Turnover

The recording of number plate of all vehicles parked in on-street areas, Council owned off-street parking areas and in a private off-street car park (Lincoln Vale car park) enabled the 'duration of stay' to be determined in these areas. Duration of stay provides an insight into parking turnover i.e. the number of times a parking space becomes available for another user.

The 'duration of stay' statistics for all vehicles parked on-street and in Council owned off-street parking areas within the study area are illustrated in **Figure 4.4**. It should be noted that the duration of stay in Lincoln Vale is excluded from **Figure 4.4** as it is a private car park, the 'duration of stay' results for this car park are discussed on the following page.

The analysis method counts the number of times a vehicle was observed parked within the same section or area e.g. a vehicle observed six times in the same section is recorded as parked for 240 minutes even if this comprised two separate trips. Conversely, any data recording or data entry errors would tend to result in a higher proportion of shorter duration trips. However, as this survey involved static vehicles the potential source of error associated with the latter scenario is expected to be minimal.

Figure 4.4 Parking Duration of Stay in All On-street and Council owned Parking Areas

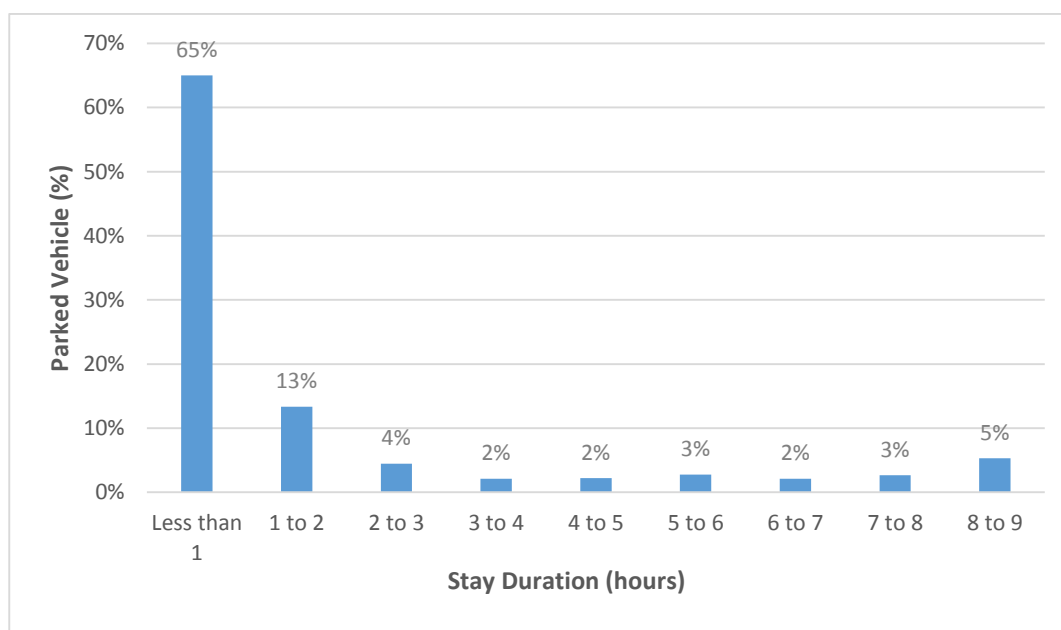


Figure 4.4 shows that approximately 65% of all vehicles parked in on-street and in Council owned off-street parking areas stayed for less than one hour and 78% of all vehicles stayed for less than 2 hours. Approximately 85% of all vehicles parked in the study area stayed for less than 4 hours with the remaining 15% parked for than 4 hours. The longer duration of stay, more than 4 hours, is likely to be representative of staff parking.

Figure 4.5 Parking Duration of Stay by Area

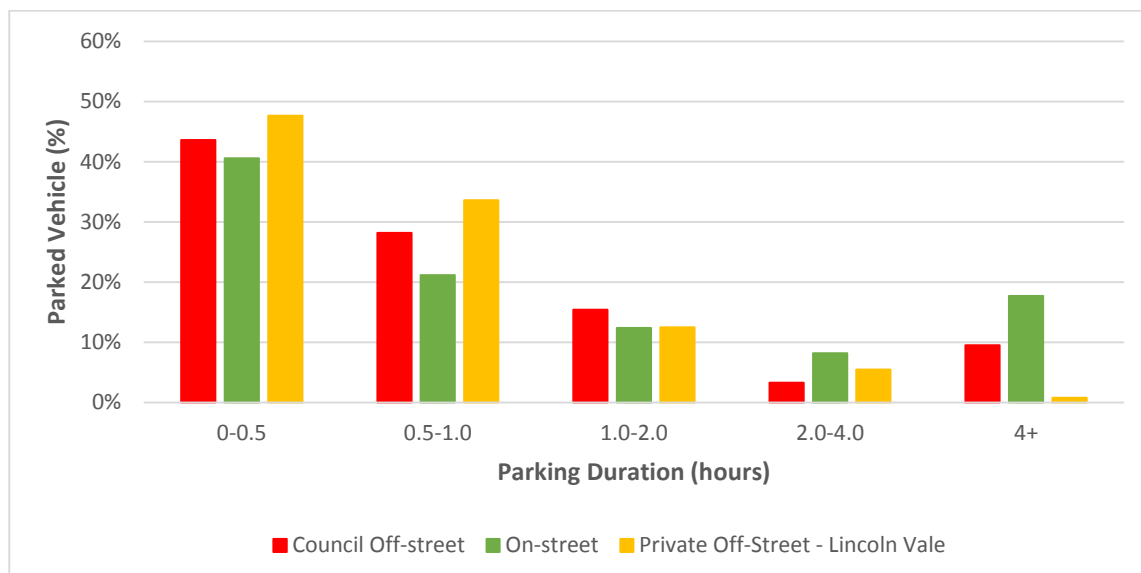


Figure 4.5 shows the differences in parking duration of stay in on-street, Council owned off-street parking areas and the duration of stay in the Lincoln Vale car park. It clearly shows that the majority of vehicles parked in Council owned off-street parking areas, in on-street parking areas and in Lincoln Vale stayed for less than 30 minutes. This short length of stay indicates that the users of off-street parking areas are visitors and customers.

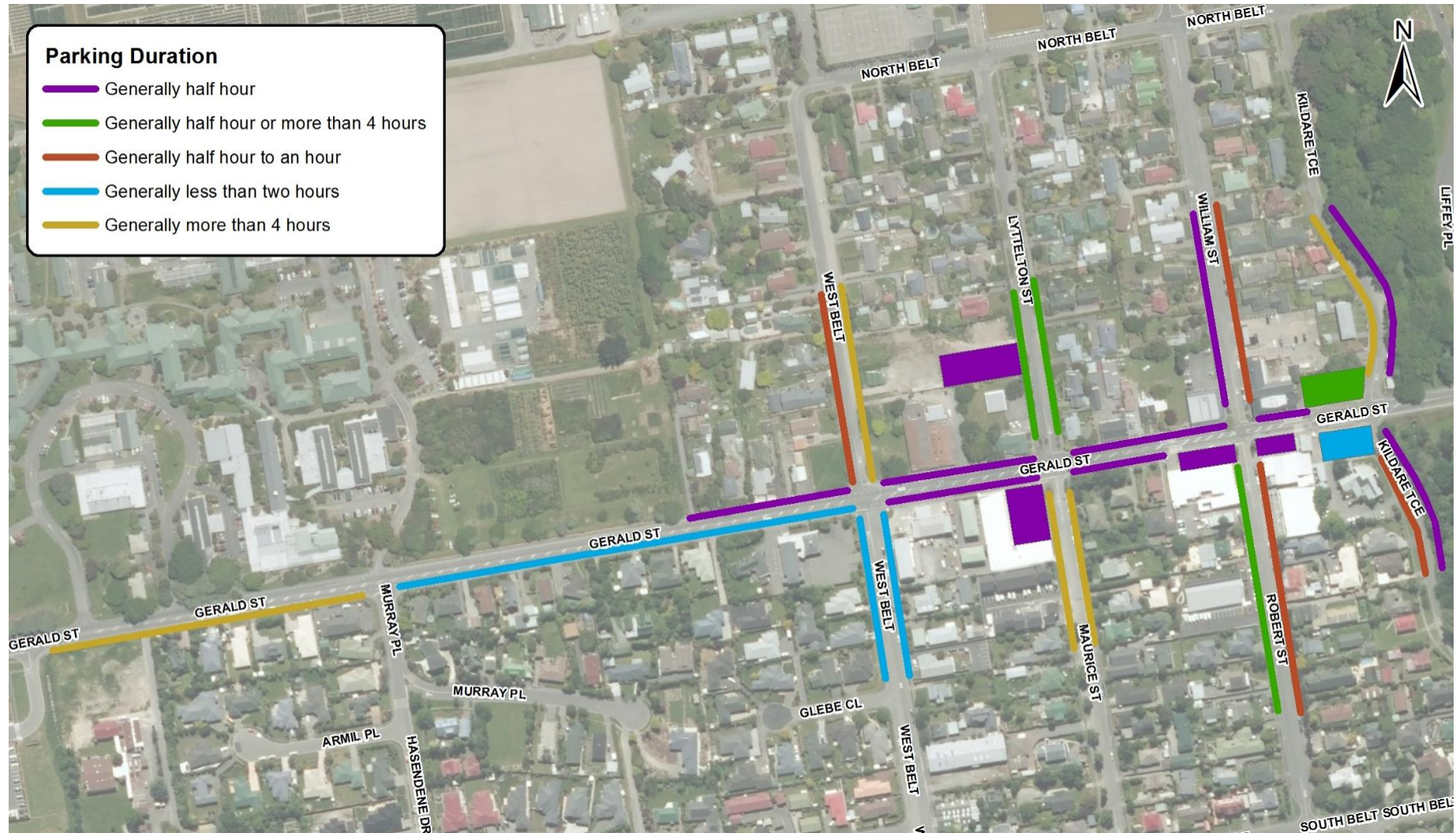
Approximately 18% of all vehicles parked in on-street parking areas stayed for more than 4 hours. In comparison, only approximately 10% of vehicles parked in Council owned off-street parking areas stayed for more than 4 hours. Longer duration of stay parking tends to occur in on-street parking areas. This type of parking is likely to be predominant used by staff and residents.

The 2015 parking survey shows that approximately 48% of all vehicles parked in the Lincoln Vale car park stayed for less than 30 minutes. A high proportion (94%) of vehicles parked in Lincoln Vale stayed for less than 2 hours. This indicates that the car park is likely to be predominantly used by customers visiting the businesses in Lincoln Vale.

The general duration of stay within each area is shown in **Figure 4.6**. Key findings from the general duration of stay within each area include:

- The majority of parking within the Lincoln Business Zone was generally for half hour or for more than 4 hours;
- Vehicles parked on Gerald Street between West Belt and Kildare Terrace generally stayed for half an hour;
- It was noted previously that the occupancy on Maurice Street exceeded 80% on average and during the peak 30-minute period. **Figure 4.6** shows that the majority of vehicles parked on Maurice Street stayed more than 4 hours, which is likely to be staff parking;
- The general duration of stay on the eastern side of West Belt north of Gerald Street was more than 4 hours. It was noted on the day of the survey that the majority of the vehicles parked in this area were associated with the construction workers at the library; and
- The longer duration of stay of more than 4 hours was observed at Gerald Street west of Murray Place. It is likely that the parking was associated with the residents on Gerald Street or staff working at New World or the adjacent service station.

Figure 4.6 General Duration of Stay within Each Area



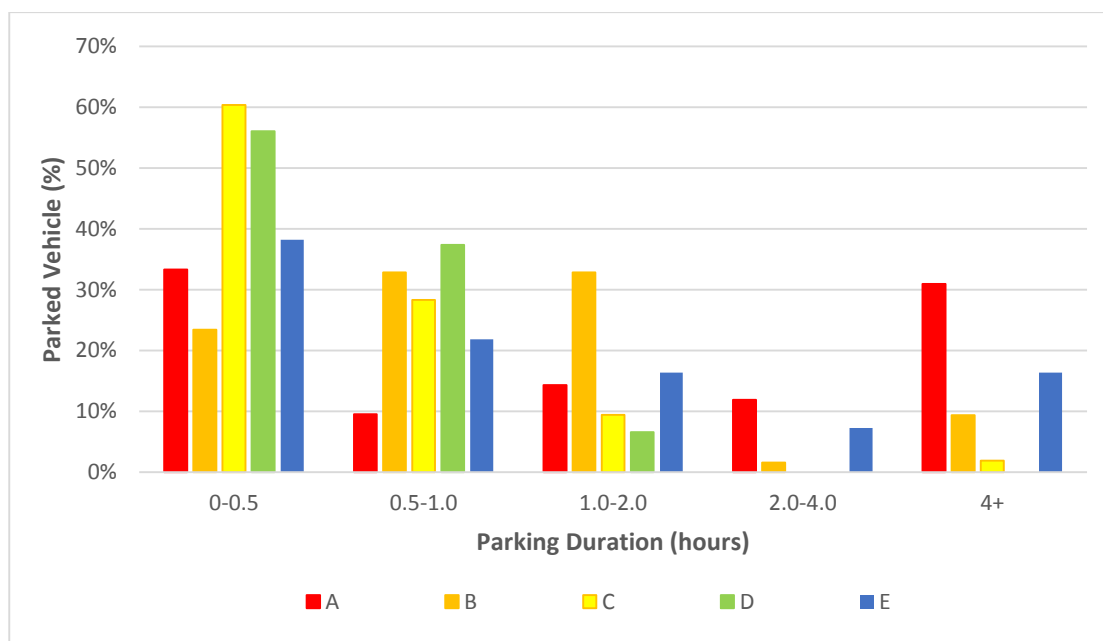
Council Owned Parking Areas Comparison

Five Council owned off-street car parks were included in the study area and these are shown as Area A to E in **Figure 4.7**. The comparison of the duration of stay in these car parks were recorded throughout the survey period and shown in **Figure 4.8**.

Figure 4.7 Council Owned Off-street Parking Locations



Figure 4.8 Council Owned Off-street Parking Duration of Stay Comparison



As can be seen from **Figure 4.8** the majority of vehicles parked in each Council owned off-street parking area tend to stay for less than 30 minutes. The exception to this is the duration off stay in Area B where most vehicles tend to stay for more than 30 minutes and less than 2 hours. Area A is also used for long term parking (more than 4 hours).

A relatively high proportion of vehicles (33%) parked in Area A stayed for more than 4 hours. This area is close to the bus stops located on Gerald Street between Kildare Terrace and Williams Street and known to be used by bus users as a park and ride type scenario rather than for staff parking. The adjoining hotel has its own off-street parking area and had low average occupancy throughout the survey period.

Area B, located in front of the medical centre, is also within close proximity to the bus stops on Gerald Street between Kildare Terrace and Williams Street. **Approximately 90% of all vehicles parked in Area B stayed for less than 2 hours and 7% stayed for more than 4 hours.** The shorter duration of stay of less than two hours is likely to be predominantly associated with customers visiting the medical centre or the nearby businesses on Gerald Street. The longer duration of stay (more than 4 hours) could be associated with staff parking by the nearby businesses or by bus users as a park and ride type scenario.

A high proportion of vehicles (more than 55%) parked in Area C and D tend to stay for less than 30 minutes and approximately 90% of the vehicles parked in these areas stayed for less than an hour. These parking areas are located in front of retail stores and the high proportion of vehicles parked for less than one hour indicates that parking in this area is likely to be predominantly used by customers visiting the retail stores.

Area E is part of the Lincoln Library off-street car park. As mentioned previously, the car park when fully formed will include the area from the west boundary of Area E to West Belt providing 62 car parking spaces in total. It was noted on the day of the parking survey (26 March 2015) that construction of the other half of the car park (west of the west boundary of Area E) was still ongoing. **Approximately 60% of vehicles parked in Area E stayed for less than an hour. A total of 84% of vehicles stayed for less than 4 hours with the remaining 16% parked for more than 4 hours.** The longer duration of stay is likely to be associated with staff working at the library, the community centre or the library construction site.

Comparison with Historical Parking Turnover – 2010

The parking survey undertaken in April 2010 by ViaStrada also included duration of stay. As mentioned previously, the study area is slightly different compared to the 2015 Lincoln parking survey. The 2010 parking survey did not include Gerald Street west of West Belt. However, several key comparisons of on-street duration of stay include:

- The predominant use of side streets is for all day parking and parking for several hours. This is generally consistent with 2015 parking turnover survey showing the longer duration of stay parking (more than 4 hours) tends to occur in on-street areas.
- There is a high proportion of all-day parking in the Council owned off-street car park at the northwest corner of Kildare Terrace and Gerald Street which is the equivalent of the Council owned off-street parking area (Area A) in the 2015 parking survey. This is consistent with the relatively high proportion of vehicles (33%) observed staying for more than 4 hours in the 2015 parking survey.
- The 2010 survey shows that the bulk of the shorter term parking (less than 30 minutes) occurred in the equivalent 2015 survey Council owned off-street parking Area B to D. The 2015 survey is consistent with the 2010 survey for Area C and D with the majority of vehicles parked in these areas stayed for less than 30 minutes. Area C in the 2015 survey shows that the majority of parking in this area stayed for more than 30 minutes and less than 2 hours.

5. *Summary of Key Findings*

The key findings of the 2015 Lincoln Town Centre parking survey are:

Occupancy

- The average parking occupancy, when combining all on-street and off-street parking, over the entire study area was 51% across the 9 hour survey period.
- Council off-street parking across the day is most demanded with 63% of spaces being occupied on average compared to 49% in both on-street and private off-street parking areas.
- The peak parking occupancy, when combining all on-street and off-street parking, was recorded to occur in the 30-minute period between 1:00pm and 1:30pm.
- The parking occupancy during the peak 30-minute period is high with occupancy exceeding 80% in some on-street and Council owned off-street parking areas. Parking occupancy in a private off-street car park (Lincoln Vale) also exceeded 80% during the peak 30-minute period.
- The lowest parking occupancy tends to occur in on-street areas near the fringe of the town centre on average and during the peak 30-minute period.

Duration of Stay

- The majority of vehicles parked within the study area stayed for less than 30 minutes.
- The longer duration of stay (more than 4 hours) tend to occur in on-street parking areas (18%) when compared to 10% in Council owned off-street parking areas. This type of parking is likely to be predominantly used by staff and residents in on-street areas, and mainly associated with staff parking in Council owned off-street parking areas.
- The majority of vehicles (94%) parked in the private off-street car park (Lincoln Vale) stayed for less than 2 hours. This indicates that the car park is likely to be predominantly used by customers visiting the businesses in Lincoln Vale.
- Comparison of the duration of stay in Council owned off-street parking areas shows that a relatively high proportion of vehicles (33%) in Area A stayed for more than 4 hours. This may be associated with bus users using the car park as a park and ride scenario given the close proximity of the car park to the bus stops on Gerald Street between Kildare Terrace and Robert Street.
- The majority of vehicles (approximately 90%) parked in Council owned off-street car parks, Area C and D, tend to stay for more than 30 minutes and less than 2 hours. These parking areas, located in front of retail stores, is likely to be predominantly used by customers visiting the retail stores with the high proportion of vehicles parked for less than 2 hours.

Comparison of Previous Survey

- The findings in the 2015 parking survey are generally consistent with the 2010 parking survey.

Appendix A *Parking Survey Results*



A1 Parking Survey Results

Table A1.1
*Number of Parking
Spaces Occupied
in the entire study
area*

Period Starting	Zone 1	Zone 2	Total	Occupancy (%)
8:30	72	117	189	36.5%
9:00	99	150	249	48.1%
9:30	118	159	277	53.5%
10:00	128	173	301	58.1%
10:30	116	169	285	55.0%
11:00	110	164	274	52.9%
11:30	123	174	297	57.3%
12:00	123	179	302	58.3%
12:30	128	171	299	57.7%
13:00	128	175	303	58.5%
13:30	116	161	277	53.5%
14:00	115	160	275	53.1%
14:30	112	152	264	51.0%
15:00	96	149	245	47.3%
15:30	97	147	244	47.1%
16:00	97	140	237	45.8%
16:30	92	136	228	44.0%
17:00	83	126	209	40.3%

Table A1.2
*Number of Parking
Spaces Occupied
in On-street
Parking Areas*

Period Starting	Zone 1	Zone 2	Total	Occupancy (%)
8:30	43	67	110	35.6%
9:00	59	83	142	46.0%
9:30	66	92	158	51.1%
10:00	73	94	167	54.0%
10:30	64	99	163	52.8%
11:00	59	101	160	51.8%
11:30	58	105	163	52.8%
12:00	67	107	174	56.3%
12:30	69	99	168	54.4%
13:00	67	109	176	57.0%
13:30	62	100	162	52.4%
14:00	64	96	160	51.8%
14:30	64	92	156	50.5%
15:00	53	87	140	45.3%
15:30	55	87	142	46.0%
16:00	53	73	126	40.8%
16:30	46	75	121	39.2%
17:00	38	72	110	35.6%

Table A1.3

Number of Parking Spaces Occupied in Council Off-street Parking Areas

Period Starting	Zone 1	Zone 2	Total	Occupancy (%)
8:30	17	20	37	43.5%
9:00	22	27	49	57.6%
9:30	29	25	54	63.5%
10:00	28	31	59	69.4%
10:30	28	26	54	63.5%
11:00	30	21	51	60.0%
11:30	40	25	65	76.5%
12:00	33	24	57	67.1%
12:30	32	30	62	72.9%
13:00	32	26	58	68.2%
13:30	32	25	57	67.1%
14:00	30	25	55	64.7%
14:30	27	22	49	57.6%
15:00	27	24	51	60.0%
15:30	26	24	50	58.8%
16:00	23	27	50	58.8%
16:30	24	27	51	60.0%
17:00	27	21	48	56.5%

Table A1.4

Number of Parking Spaces Occupied in Privately Owned Off-street Parking Areas

Period Starting	Zone 1	Zone 2	Total	Occupancy (%)
8:30	12	30	42	33.9%
9:00	18	40	58	46.8%
9:30	23	42	65	52.4%
10:00	27	48	75	60.5%
10:30	24	44	68	54.8%
11:00	21	42	63	50.8%
11:30	25	44	69	55.6%
12:00	23	48	71	57.3%
12:30	27	42	69	55.6%
13:00	29	40	69	55.6%
13:30	22	36	58	46.8%
14:00	21	39	60	48.4%
14:30	21	38	59	47.6%
15:00	16	38	54	43.5%
15:30	16	36	52	41.9%
16:00	21	40	61	49.2%
16:30	22	34	56	45.2%
17:00	18	33	51	41.1%

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