

Cambridge Private Non-Residential Parking Study

Study Report

November 2016



**GREATER
CAMBRIDGE
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Report: Cambridge Private Non-Residential Parking Study 06 January 2017

Explanatory Note

This report captures a snapshot of the volume and use of workplace parking spaces (i.e. private, non-residential) in Cambridge during October 2016.

The survey was commissioned by the Greater Cambridge City Deal in partnership with Cambridgeshire County Council and managed by transport planning consultancy Mott MacDonald.

The survey involved the analysis of aerial photographs of the Cambridge area to identify sites used for parking, both surface and multi-storey. Survey staff subsequently visited these sites to assess the number of spaces, whether they had any specific designation (e.g. disabled or visitor), and how many were in use.

The results of the survey will help inform a strategy for charging for these spaces, with the primary goal of securing an income stream to fund elements of the plan that require financial support, for example, more frequent bus services and/or removing the charge for parking at Park and Ride sites.

Related Publications

Two parking survey reports are being published today. These surveys capture the volume and pattern of use of on-street and workplace parking in Cambridge.

The Board Paper on City Access is also being published today. It contains the next steps for the package of measures to tackle congestion and improve access to central Cambridge. It will be considered by the City Deal Joint Assembly on 18 January and the City Deal Executive Board on 25 January.

In the Board Paper, there is an officer recommendation that the Board continues to support the co-design of a workplace parking levy scheme with employers, with more detail available for Board and public review later in 2017.

There is also a recommendation that City Deal involvement in the design of a workplace parking levy scheme and the expansion of on-street parking controls be combined within the Parking Management Delivery Plan to be led and managed from within the City Access team.

Background

The cost and availability of parking has a pivotal influence on people's choice of travel mode. Continuing to manage parking use is an important part of a holistic package of measures required to sustainably deliver growth in and around Cambridge.

A workplace parking levy was part of the package of 8 measures to tackle peak-time congestion shared with the public in summer/autumn 2016 when feedback was requested through the "Tackling Peak-time Congestion" survey. The package includes a range of measures which, taken together, would reduce congestion, encourage more people to travel by public transport, bike or on foot and improve the environment generally in central Cambridge. Work defining the package is being led by the new City Access team which forms part of the City Deal officer team.

It should be easy to get into, out of, and around Cambridge by public transport, by bike and on foot. This is the transport vision set out by the Greater Cambridge City Deal, which is developing a

number of projects to help achieve this, including the Chisholm Trail cycleway and improved bus facilities from Cambourne to Cambridge, as well as along the A1307 from Haverhill to Cambridge. The City Access project is central to this and aims to help more people get into and out of Cambridge by sustainable means and to boost economic growth without increasing congestion.

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Issue and Revision Record

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2	November 2016	Paul Parkhouse	Carl Beet	Paresh Shingadia	First issue following client comments

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1 Introduction

1.1 Background

As an extension to the wider Cambridge Access Study, Cambridgeshire County Council commissioned Mott MacDonald in July 2016 to undertake a study of Private Non-Residential (PNR) parking in Cambridge. The overall aim of the study is to identify the capacity and weekday occupancy levels of all PNR parking in the city.

The last such study was conducted in 1989/90 by Colin Buchanan and Partners. This study therefore serves to update and expand on that earlier work.

1.2 Report Structure

The report is structured as follows:

- Section 2 outlines the methodology for the parking study
- Section 3 presents the findings of the parking study
- Section 4 summarises the study

2 Study Methodology

2.1 Introduction

The purpose of this section is to describe the scope of the study and the methodology employed to deliver it.

2.2 Study Purpose

The main purpose of the study is to identify current levels of PNR parking supply and weekday usage in Cambridge.

For the purposes of this study, PNR parking is defined as any off-street parking which specifically exists to serve a non-residential land use. It therefore includes all off-street parking except public general use car parks and private residential parking. For the sake of clarity, all public car parks advertised on the Council's website¹ were not included in the survey.

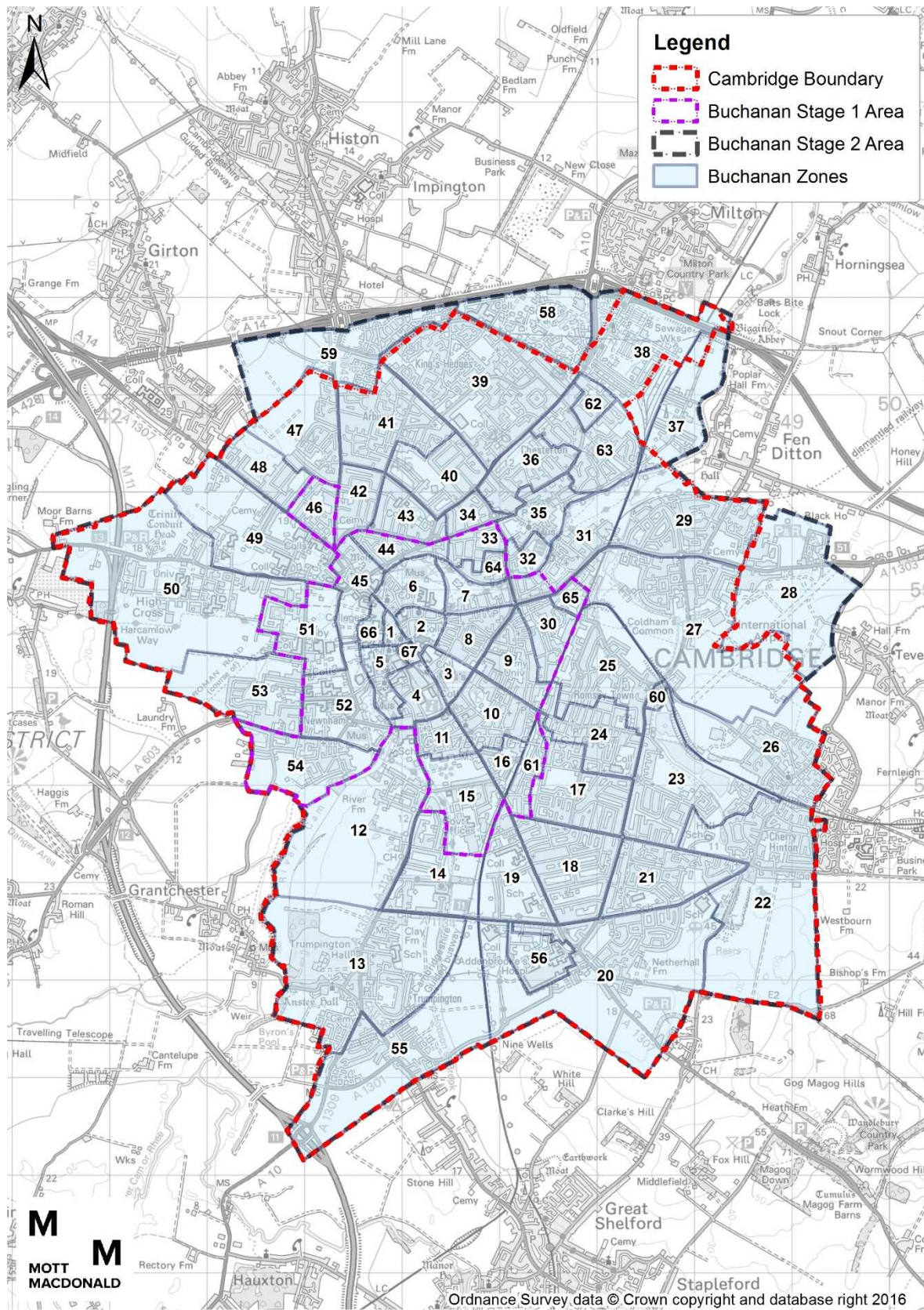
2.3 Study Area

The Buchanan study was undertaken in two stages. The following image shows:

- The City of Cambridge boundary
- The Stages 1 and 2 Buchanan survey boundary and zones, covering the outer areas of the city as well as parts of South Cambs

As agreed with the client, this study is based on the Stage 2 Buchanan boundary. This boundary still includes all PNR parking within the City of Cambridge, plus the main areas of development just outside the boundary, like the Science Park. Using the same boundary also allows for direct comparison with the previous survey. To further allow comparison, we have also reported against the same survey zones.

¹ <https://www.cambridge.gov.uk/parking>

Figure 1: Study area and zoning

Source: Buchanan Study 1989/90

2.4 Study Methodology

The first requirement of the study was to identify the location of all PNR sites within the study area. A comprehensive desktop survey was therefore undertaken first, using web-based satellite imagery to identify as many sites as possible. These were then mapped and referenced in GIS, while an initial estimate of site capacity and associated land use was made wherever feasible.

The list of sites was then sent to a survey subcontractor who:

- Visited each site to seek access permissions
- Where access was granted or unobstructed, the site capacity and land use details were confirmed or amended as appropriate
- Where access was denied, contact details were obtained for securing access
- Where sites did not qualify as PNR, eg residential only or closed for construction etc, these were removed from the list
- Where new PNR sites were identified, these were added to the list

Of the original list of 706 sites identified, this initial on-site investigation resulted in 0 sites being added and 66 sites being removed, leaving a population total of 640 valid sites. Of these, 96 sites needed access permissions.

Permissions were sought for these sites by Mott MacDonald until and during the main survey period, which took place during both school and university term-time from Tuesday 4th October 2016 to Thursday 20th October 2016 inclusive. Surveys were undertaken on Mondays to Thursdays and between 10:00 and 12:00 and between 14:00 and 16:00 only in order to coincide with times of likely peak PNR parking demand.

By the end of the survey period:

- 595 sites were surveyed and access was denied at 45 sites
- Of the 45 sites where access was denied, capacity estimates were only unavailable for just 2 underground car parks
- The 45 non-accessed sites constitute 7% of the full population of sites, both in terms of the total number of sites and the total capacity of all sites. This means that the surveyed sites represent 93% of the full population

For each site not accessed, the average car park utilisation result for its land use category has been applied to the final results. For example, for a non-accessed university car park, this land use's average utilisation result of 63% has been applied. This method allows for a full set of final results, except for the 2 non-accessed underground car parks, but it should be remembered when viewing the results that the utilisation levels are estimated for 7% of the sample. It is noted in the full list of results presented in the next section which sites are based on estimated values.

3 Survey Results Summary

3.1 Introduction

The purpose of this section is to present a summary of the results from the PNR survey process. The full survey results per car park site are attached in Appendix A.

3.2 PNR Capacity Results

3.2.1 Total Capacity

The following table presents the total PNR capacity level measured by the surveys and compares with the previous result from the 1989/90 Buchanan survey. This shows that total PNR parking capacity has increased between the two survey periods by about 3.8%.

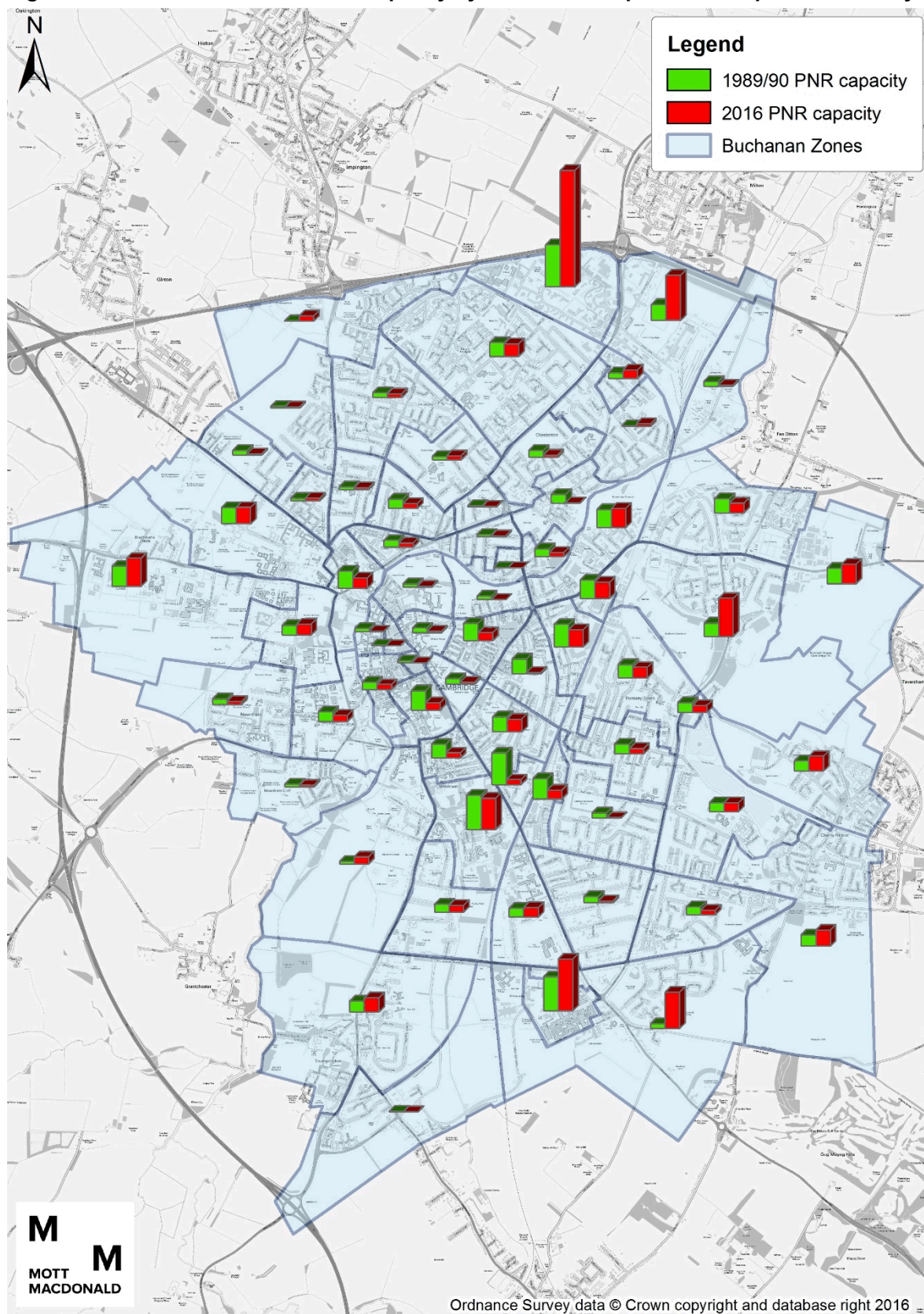
Table 1: Total measured 2016 PNR capacity and comparison with previous survey result

Total Capacity (spaces)		Change	
2016 Survey Result	1989/90 Survey	Absolute Change	% Change
41,962	40,423	+1,539 spaces	+3.8%

Source: 2016 surveys and Buchanan Report

The following figure shows total capacity results from both surveys by zone. The equivalent tabulated results are in Appendix B.1. The figure shows that:

- The overall increase in capacity is not experienced uniformly across zones but that some show a strong increase while others show a decrease
- The highest number of PNR spaces are found in the Science Park (zone 58), followed by the Cambridge North East Fringe site (zone 38) and Addenbrooke's (zone 56)
- These three zones also show some of the strongest increases in PNR capacity between surveys, as well as the development area adjacent to Addenbrooke's (zone 20) and the area between Newmarket Road and Coldhams Lane (zone 27)
- Zones in or near the city centre are most likely to have seen a drop in capacity between the two surveys

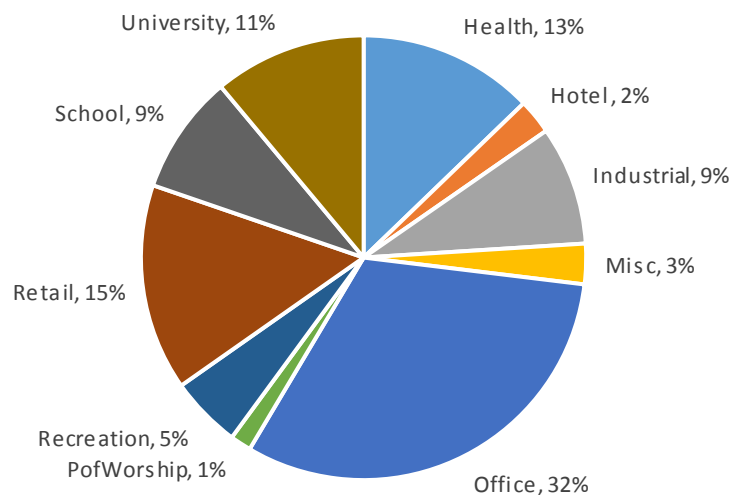
Figure 2: Total measured 2016 PNR capacity by zone and comparison with previous survey result

Source: 2016 surveys and Buchanan Report

3.2.2 2016 PNR Capacity by Land Use Type

The following chart shows the distribution of PNR parking capacity by associated land use.

Figure 3: Distribution of PNR capacity by land use



Source: 2016 survey data

This chart shows that:

- Office parking comprises the highest proportion at nearly a third of all PNR capacity. This land use is also one of the most likely to generate trips during weekday peak hours
- The education sector comprises 20% of all capacity. These land uses generate most trips during term times
- The retail sector accounts for about 15% of all capacity, though it is noted that this stock does not include the city's Council owned public car parks which are also used for this purpose. This land use generates trips by both staff and visitors throughout the week
- The health sector accounts for about 13% of total capacity. This land use generates trips by both staff and visitors throughout the day, as well as evenings and weekends

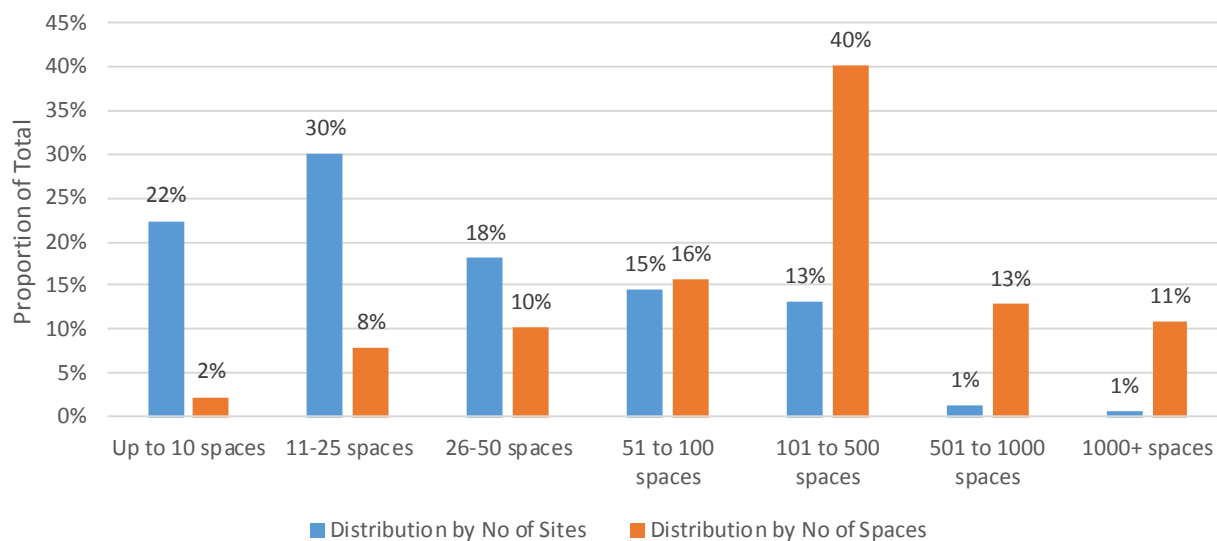
3.2.3 2016 PNR Car Park Size Distribution

The following chart shows the distribution of PNR car park sizes within the survey area, shown in terms of the number of car parks and the total capacity of parking within each category.

This chart shows that:

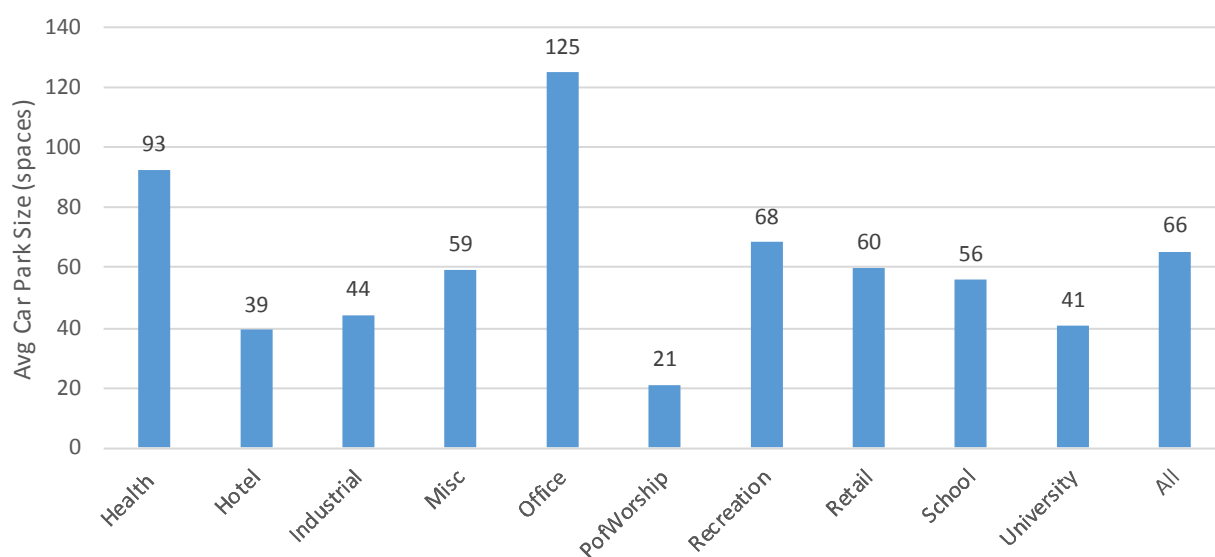
- 22% of all surveyed car parks are 10 spaces or less, but this comprises just 2% of total capacity
- 70% of car parks are 50 spaces or less, but this comprises only 20% of total capacity
- By contrast, car parks of over 100 spaces comprise just 15% of all car parks but provide 64% of total capacity

It is noted that this survey only records the physical size of individual car parks and not the number of spaces in each car park which are attributable to individual employers.

Figure 4: Distribution of PNR car park sizes by number of sites and number of spaces

Source: 2016 survey data

The following chart shows the average car park size by associated land use.

Figure 5: Average car park size by land use type

Source: 2016 survey data

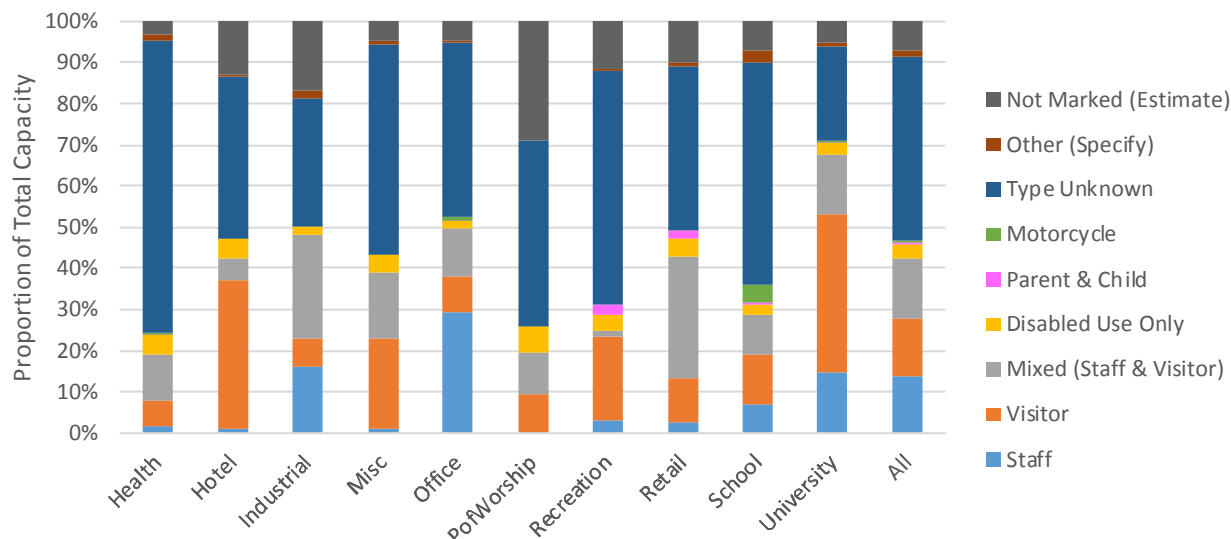
This chart shows that

- Office and health land uses have the biggest car parks on average
- Places of worship, hotels, industrial and university land uses have the smallest.
- The average PNR car park size is 66 spaces

3.2.4 2016 PNR Capacity by Space Type

The following chart shows the distribution of parking space types for each land use.

Figure 6: Distribution of parking space types by land use



Source: 2016 survey data

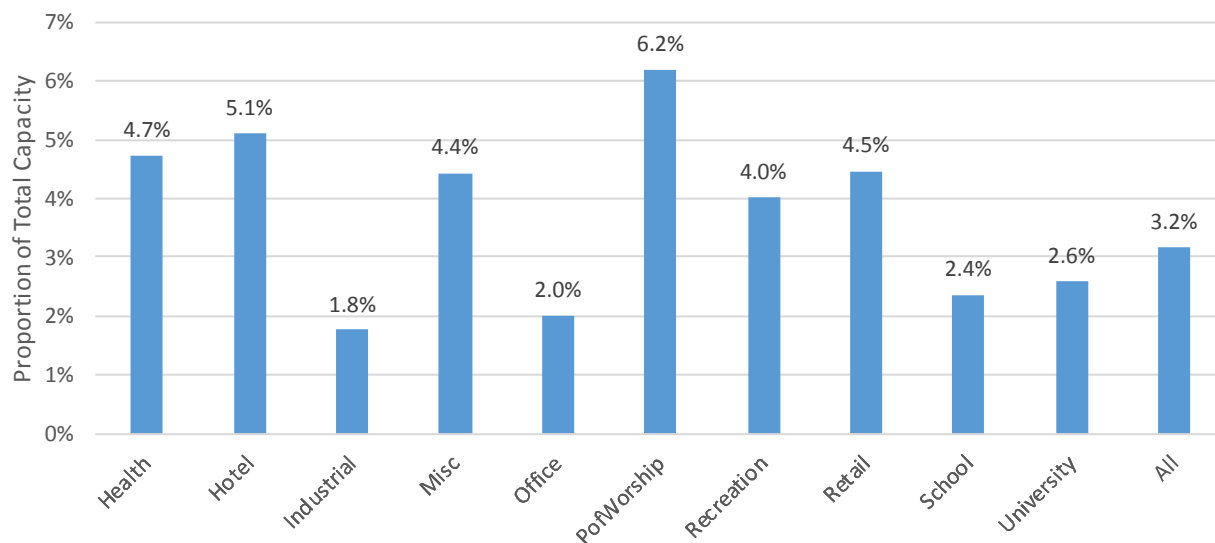
This chart shows that:

- The most common parking space type is in the 'type unknown' category. This reflects the fact that, on site, it is often difficult to determine the intended usage of parking spaces
- Designated staff parking is most prevalent for office car parks
- Disabled spaces are present across all car parks
- Parent and child parking is most prevalent in recreation and retail car parks
- Motorcycle parking is most prevalent in school and office car parks
- Unmarked parking is most likely to be found in place of worship and industrial car parks

The following chart further unpacks the above disabled parking provision result and shows the average level of this type of parking for each land use.

This chart shows that:

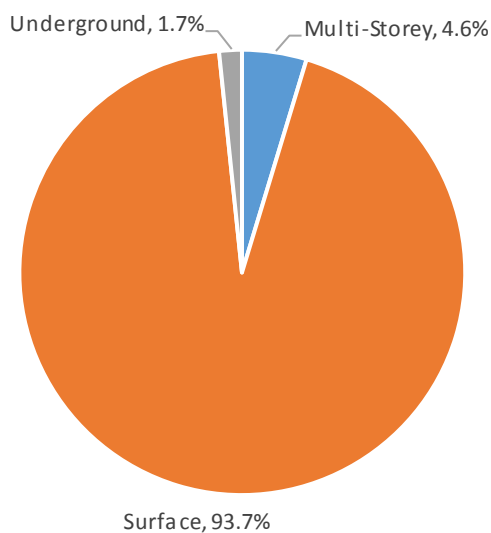
- Disabled parking provision levels are highest in place of worship car parks, reflecting the often older user of this type of facility
- Provision levels are also noticeably higher for land uses with a strong public-facing element, such as the health, hotel, recreation and retail car parks
- For mainly worker-related land uses, such as industrial, office, school and university car parks, provision levels are lower, but still 1.8% or above
- Overall, the average level of disabled parking across all PNR car parks is 3.2%

Figure 7: Average level of disabled space provision by land use

Source: 2016 survey data

3.2.5 2016 PNR Capacity by Construction Type

The following chart shows the distribution of PNR parking capacity by car park construction type.

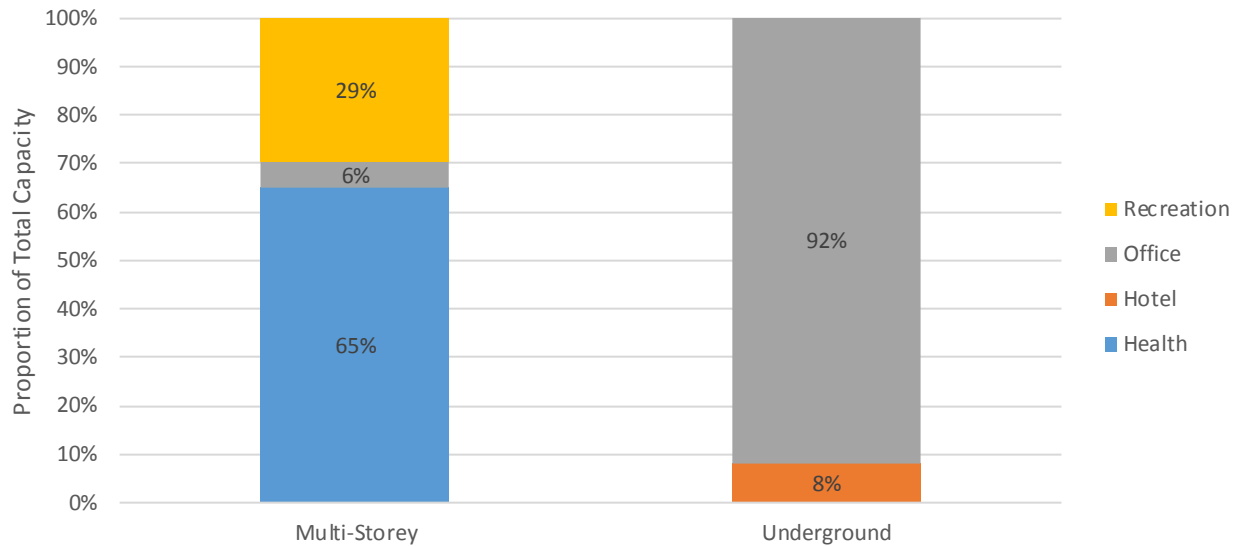
Figure 8: Distribution of parking capacity by car park construction type

Source: 2016 survey data

This chart shows that nearly 95% of PNR parking capacity is provided at-grade. It should be noted that the underground parking proportion would be a little higher had the survey team been able to access two underground car parks (sites 238 and 242).

For the multi-storey and underground car parks, the following chart shows the land uses these serve.

Figure 9: Distribution of non-surface car park capacity by land use



Source: 2016 survey data

This chart shows that:

- Nearly two-thirds of multi-storey car park capacity is for health land uses, with most of the remainder being for recreation land uses
- Underground car parking is almost exclusively office related, being found mostly in the basements of office buildings

3.3 PNR Demand and Utilisation Results

3.3.1 Total Demand Results

The following table presents the total PNR demand level measured by the surveys and compares with the previous result from the 1989/90 Buchanan survey. This shows that, despite Table 1 above confirming a 3.8% increase in overall PNR capacity between surveys, actual demand has dropped over 13%. This reflects the drop in car mode share observed in Cambridge during this period.

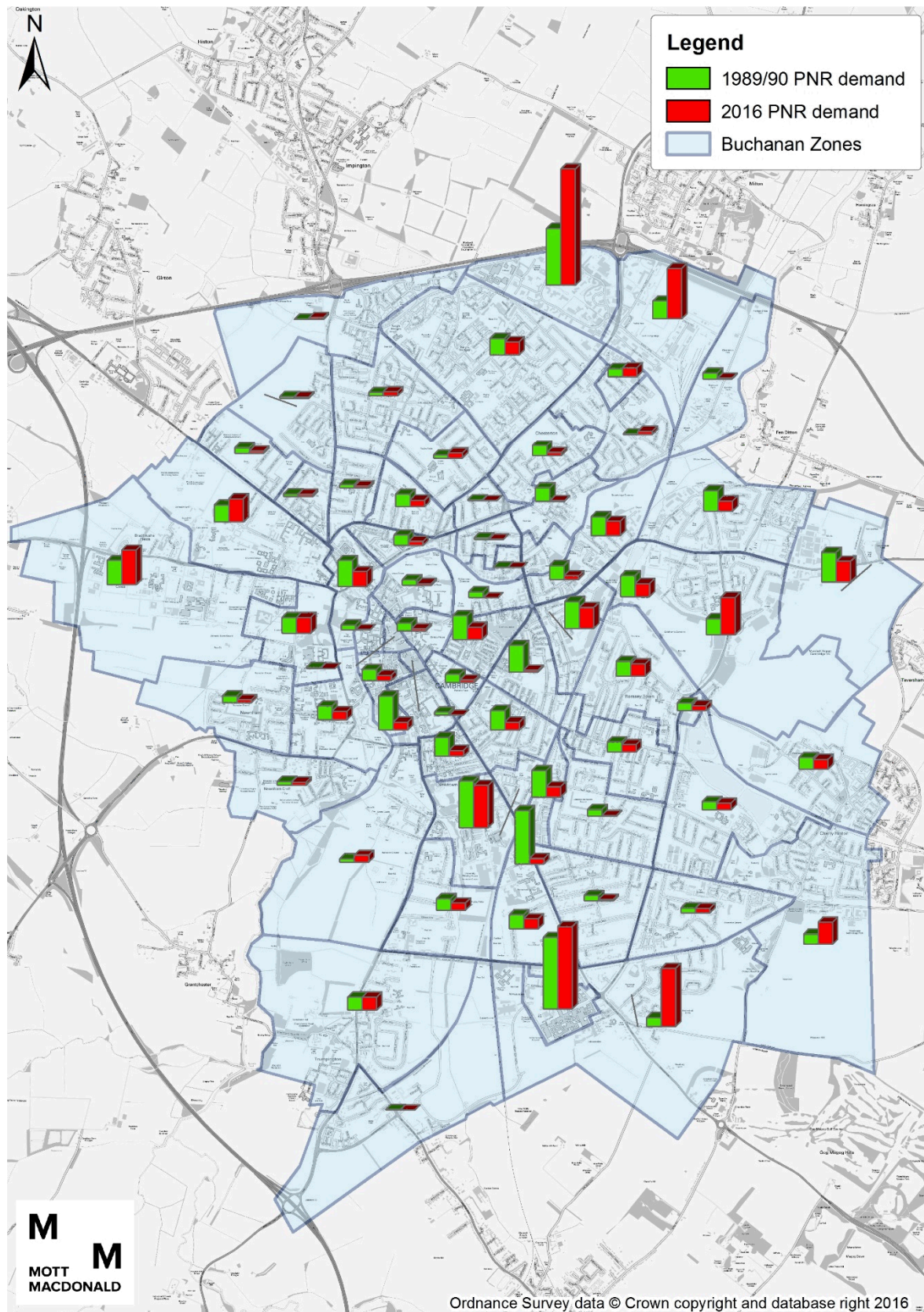
Table 2: Total measured 2016 PNR demand and comparison with previous survey result

Total Demand (spaces)		Change	
2016 Survey Result	1989/90 Survey	Absolute Change	% Change
23,989	27,647	-3,658 spaces	-13.2%

Source: 2016 surveys and Buchanan Report

The following figure shows total demand results from both surveys by zone. The equivalent tabulated results are in Appendix C.1.

This figure shows a similar pattern of results to the equivalent figure for parking capacity shown in Figure 2 above, except that the increases in demand are generally not as significant as those for capacity and the decreases in demand are generally greater. The drop in PNR demand in the city centre is particularly noticeable.

Figure 10: Total measured 2016 PNR demand by zone and comparison with previous survey result

Source: 2016 surveys and Buchanan Report

3.3.2 Total Utilisation Results

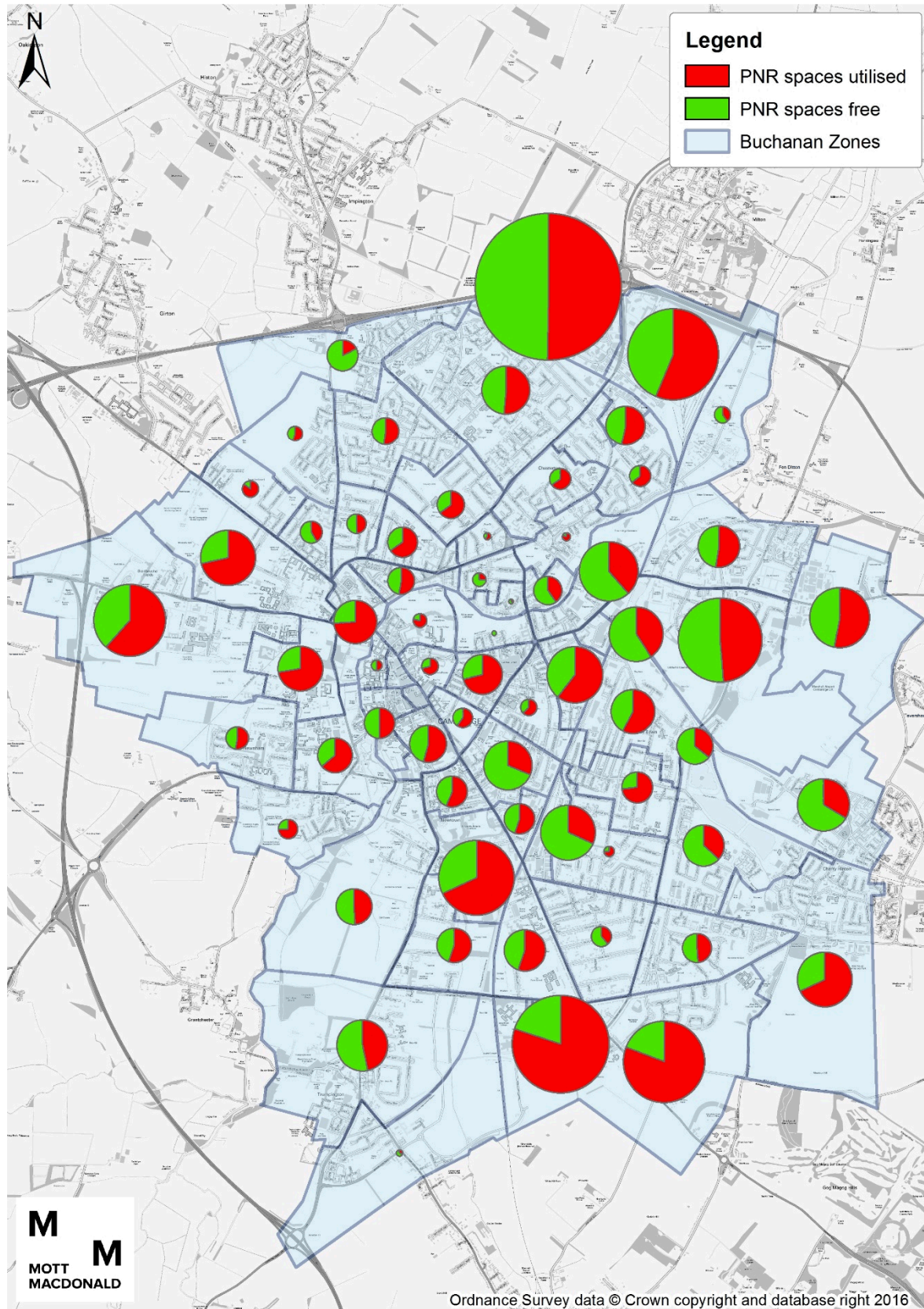
The following table presents the total PNR utilisation level measured by the surveys and compares with the previous result from the 1989/90 Buchanan survey. As would be expected from the above capacity and demand results, this shows an absolute drop in average occupancy levels of nearly 12% (equivalent to a proportional decrease of 17.1%).

Table 3: Total measured 2016 PNR utilisation and comparison with previous survey result

Total Utilisation (Demand/Capacity)		Change	
2016 Survey Result	1989/90 Survey	Absolute	% Change
57.2%	68.4%	-11.2%	-16.4%

Source: 2016 surveys and Buchanan Report

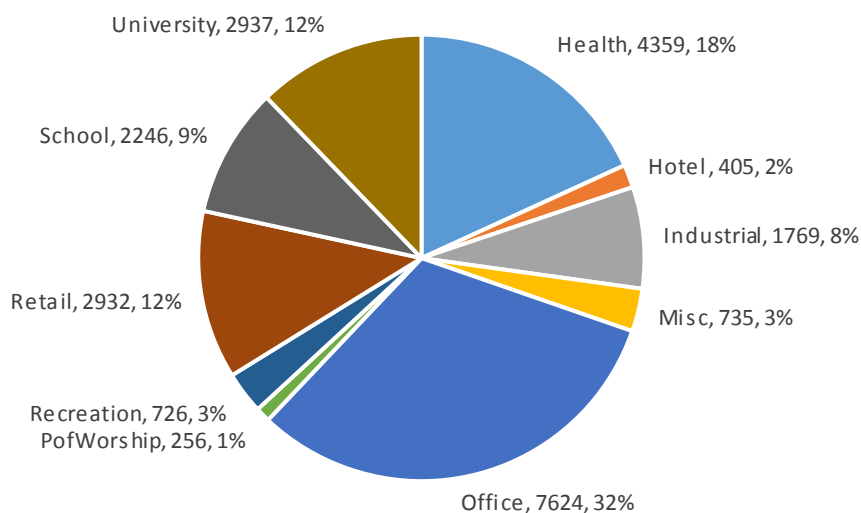
The following figure shows utilisation results for the 2016 survey only by zone. The tabulated results for both surveys are in Appendix D.1.

Figure 11: Total measured 2016 PNR utilisation by zone

3.3.3 2016 PNR Demand by Land Use Type

The following chart shows the distribution of PNR parking demand by associated land use.

Figure 12: Distribution of PNR demand by land use



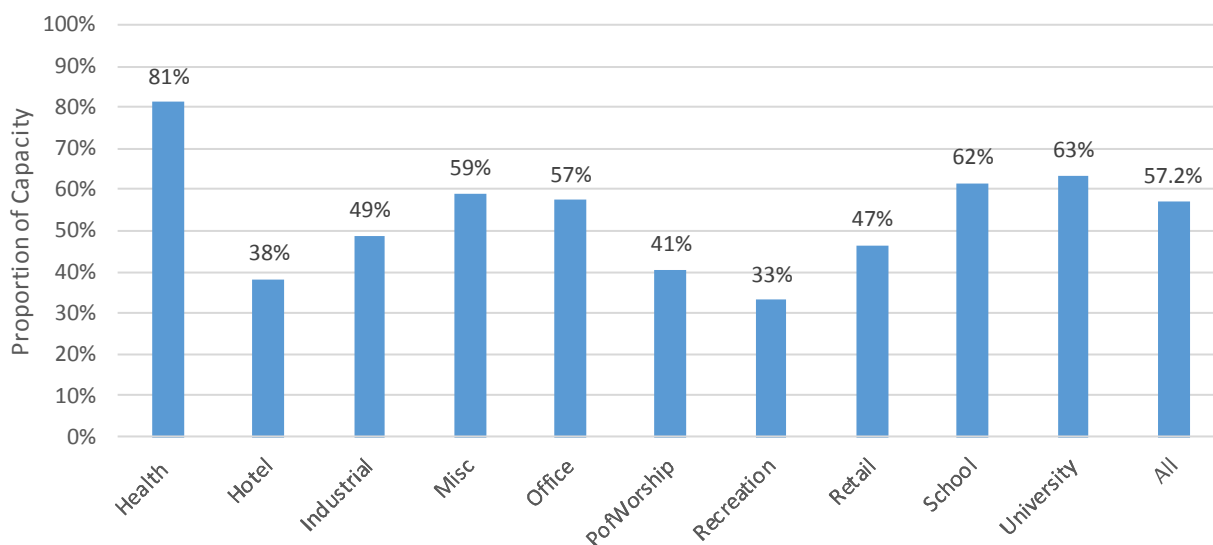
Source: 2016 survey data

This chart shows a similar distribution for PNR demand as does Figure 3 above for PNR capacity. However, comparison between the two shows some differences, which is accounted for by the fact that different land use car parks are used to different levels of utilisation. This is covered by the next chart.

3.3.4 2016 PNR Utilisation by Land Use Type

The following chart shows the average car park utilisation level by land use.

Figure 13: Distribution of average car park utilisation levels by land use



Source: 2016 survey data

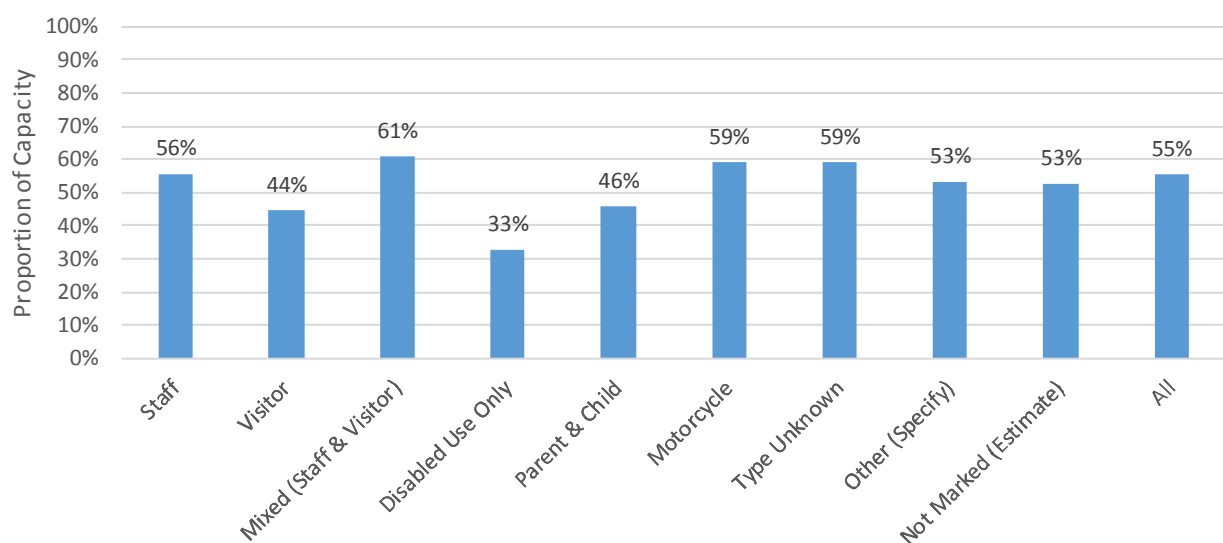
This chart shows that:

- Significantly the highest utilisation level is observed in health land use car parks
- The next highest level of utilisation is seen in the worker-related car parks for office and education land uses
- The lowest levels of utilisation are observed in the more visitor-related car parks for recreation, hotel and place of worship uses

3.3.5 2016 PNR Utilisation by Space Type

The following chart shows the average utilisation levels of each parking space type.

Figure 14: Average car park utilisation levels by parking space type



Source: 2016 survey data

This chart shows a similar level of utilisation across all parking spaces types, but with disabled parking showing noticeably the lowest level. In light of Figure 7 above, this suggests that parking standards could be requiring an over-provision of these spaces in private car parks.

4 Survey Summary

4.1 Survey Background

As an extension to the wider Cambridge Access Study, Cambridgeshire County Council commissioned Mott MacDonald in July 2016 to undertake a study of Private Non-Residential (PNR) parking in Cambridge. The overall aim of the study is to identify the capacity and weekday occupancy levels of all PNR parking in the city.

The last such study was conducted in 1989/90 by Colin Buchanan and Partners. This study serves to update and expand on that earlier work and therefore adopts the same survey area.

4.2 Survey Purpose and Methodology

The main purpose of the study is to identify current levels of PNR parking supply and weekday usage in Cambridge.

For the purposes of this study, PNR parking is defined as any off-street parking which specifically exists to serve a non-residential land use. It therefore includes all off-street parking except public general use car parks and private residential parking.

The study was undertaken in stages as follows:

- A desktop survey was undertaken by Mott MacDonald to identify all potential PNR sites in the study area
- A survey subcontractor visited all sites and confirmed capacity and land use details for valid sites where access was permitted, while also identifying ineligible sites to be removed from the survey
- Where access was not permitted, Mott MacDonald sought to secure access
- During school and university term-time weekdays (except Friday) in October 2016, the survey subcontractor visited all permitted sites and recorded parking utilisation at peak times of day

At the end of the survey, 93% of sites were accessed and surveyed, while site capacity data was obtained for all but two of the remainder. Utilisation levels for the non-accessed sites were estimated by applying the average utilisation level for each site's land use.

4.3 Survey Results Summary

The overall survey results and the equivalent Buchanan survey results are summarised in the following table.

Table 4: Total measured 2016 PNR results and comparison with previous survey

Parameter	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
Total Capacity	41,962	40,423	+1,539 spaces	+3.8%
Total Demand	23,989	27,647	-3,658 spaces	-13.2%
Average Utilisation	57.2%	68.4%	-11.2%	-16.4%

Source: 2016 surveys and Buchanan Report

This shows that, though PNR capacity levels have increased overall by 3.8% between 1989/90 and 2016, actual demand has dropped over 13%. This reflects the falling average car mode share in the city across the same period.

However, the results also show that this trend is not uniform across the city. The following table shows the above results for the city centre historic core (bounded by the River Cam and the East Road corridor and represented by zones 1-8, 66 and 67).

Table 5: Measured 2016 PNR result for City Centre Core and comparison with previous survey

Parameter	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
Total Capacity	1,546	4,001	-2,455 spaces	-61%
Total Demand	958	3,145	-2,187 spaces	-70%
Average Utilisation	62%	79%	-17%	-21%

Source: 2016 surveys and Buchanan Report

This table shows a noticeable drop in both capacity and demand levels in the city centre followed also by a decrease in utilisation. This reflects the measures implemented in Cambridge to reduce car usage in the city centre.

By contrast, the following tables show the above results for the Science Park / Northern Fringe East area (zone 58 and 38) and the Biomedical Campus (zone 56), which are both situated more to the outside edge of the city.

Table 6: Measured 2016 PNR result for Science Park / Northern Fringe and comparison with previous survey

Parameter	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
Total Capacity	9,581	3,469	+6,112 spaces	+176%
Total Demand	4,975	2,224	+2,751 spaces	+124%
Average Utilisation	52%	64%	-12%	-19%

Source: 2016 surveys and Buchanan Report

Table 7: Measured 2016 PNR result for Biomedical Campus and comparison with previous survey

Parameter	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
Total Capacity	3,066	2,021	+1,045 spaces	+52%
Total Demand	2,454	2,134	+320 spaces	+15%
Average Utilisation	80%	106%	-26%	-24%

Source: 2016 surveys and Buchanan Report

These tables show significant increases in both supply and demand levels in both areas. The rise in capacity levels is particularly noticeable in the Science Park / Northern Fringe East area where the number of parking spaces provided has almost tripled since the previous survey. By contrast, utilisation levels have dropped in both areas by around 20%.

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A. Full Site Specific Results

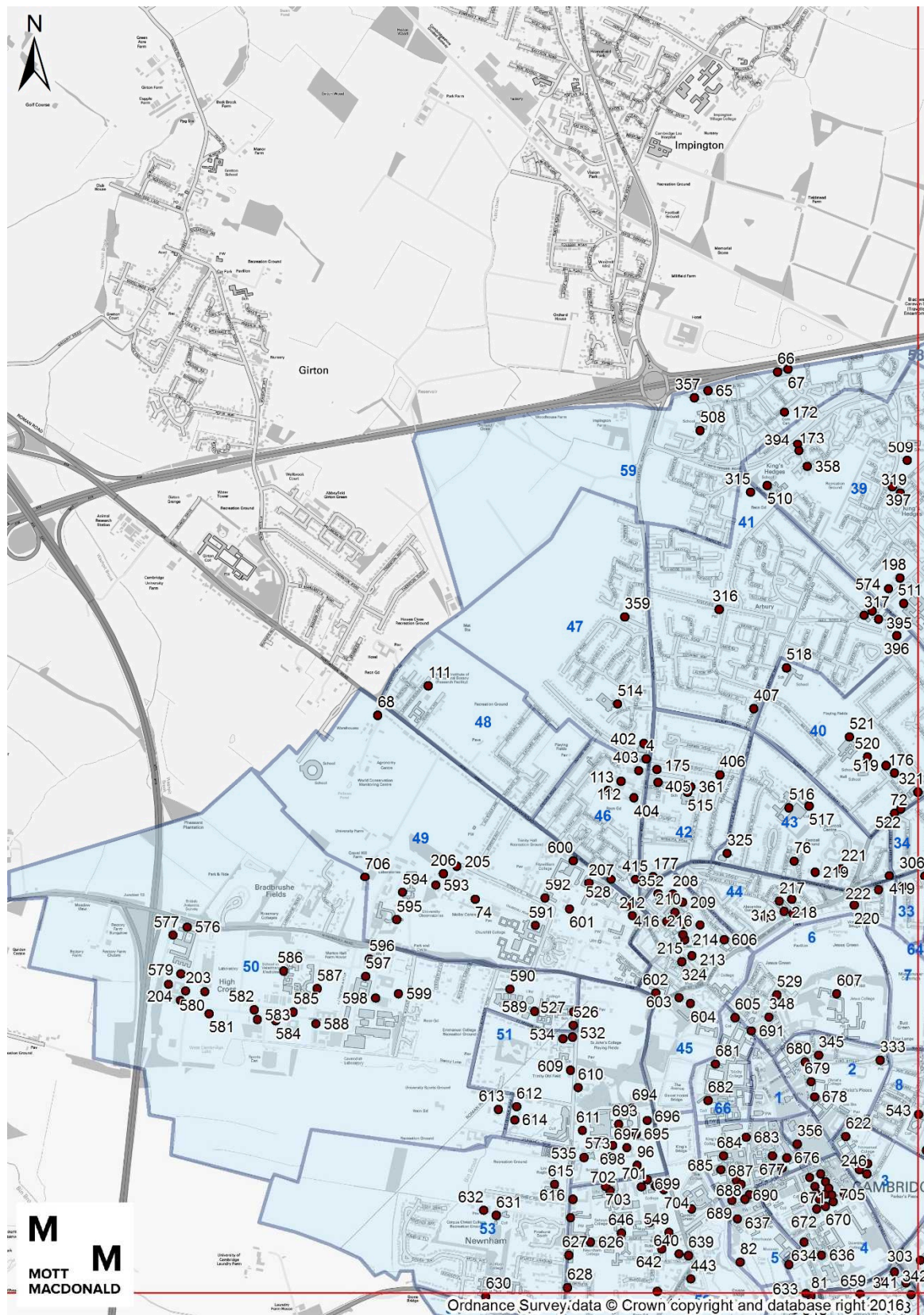
Figure 15: Zone structure and site locations in the survey area's north west quadrant

Figure 16: Zone structure and site locations in the survey area's north east quadrant

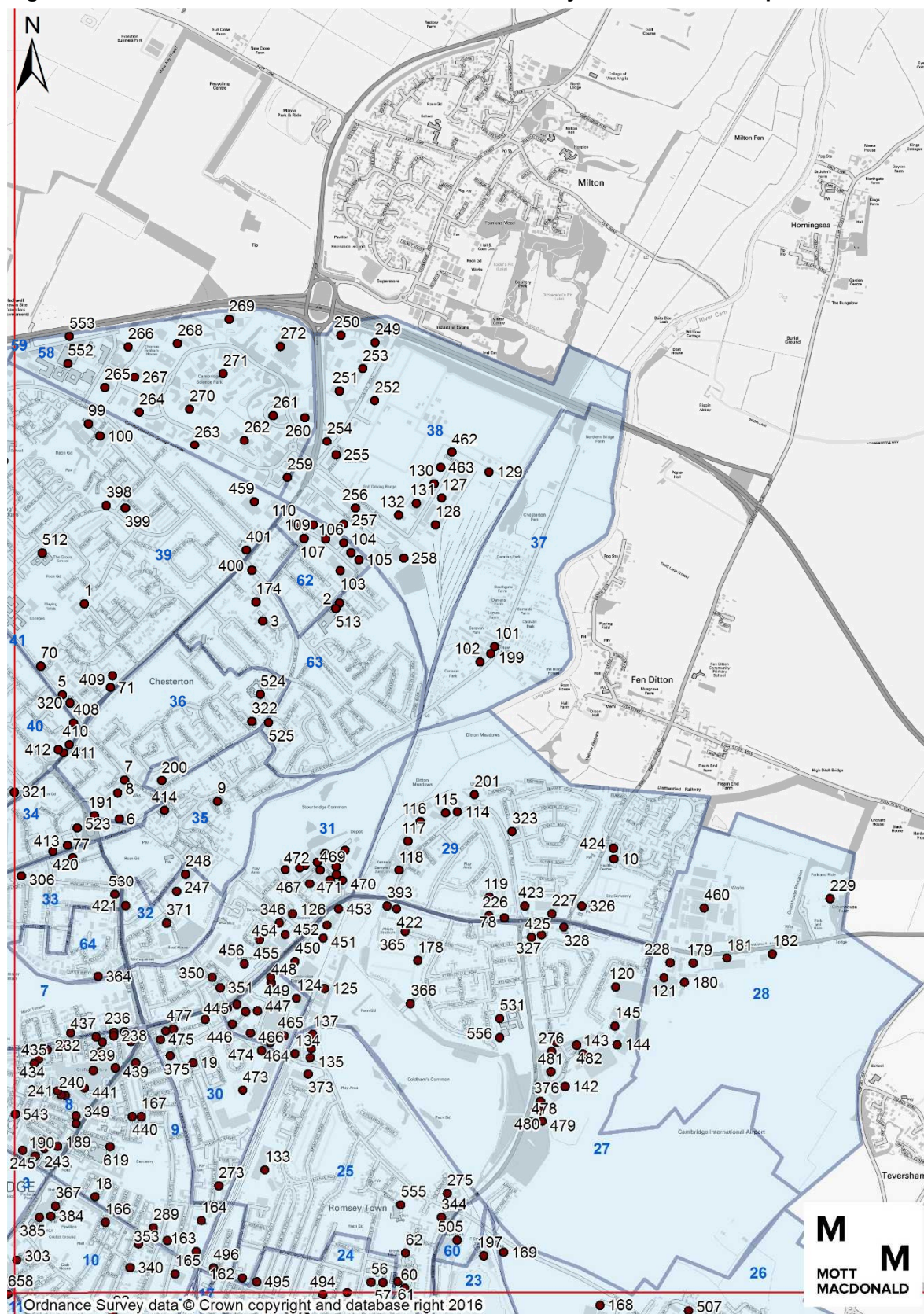


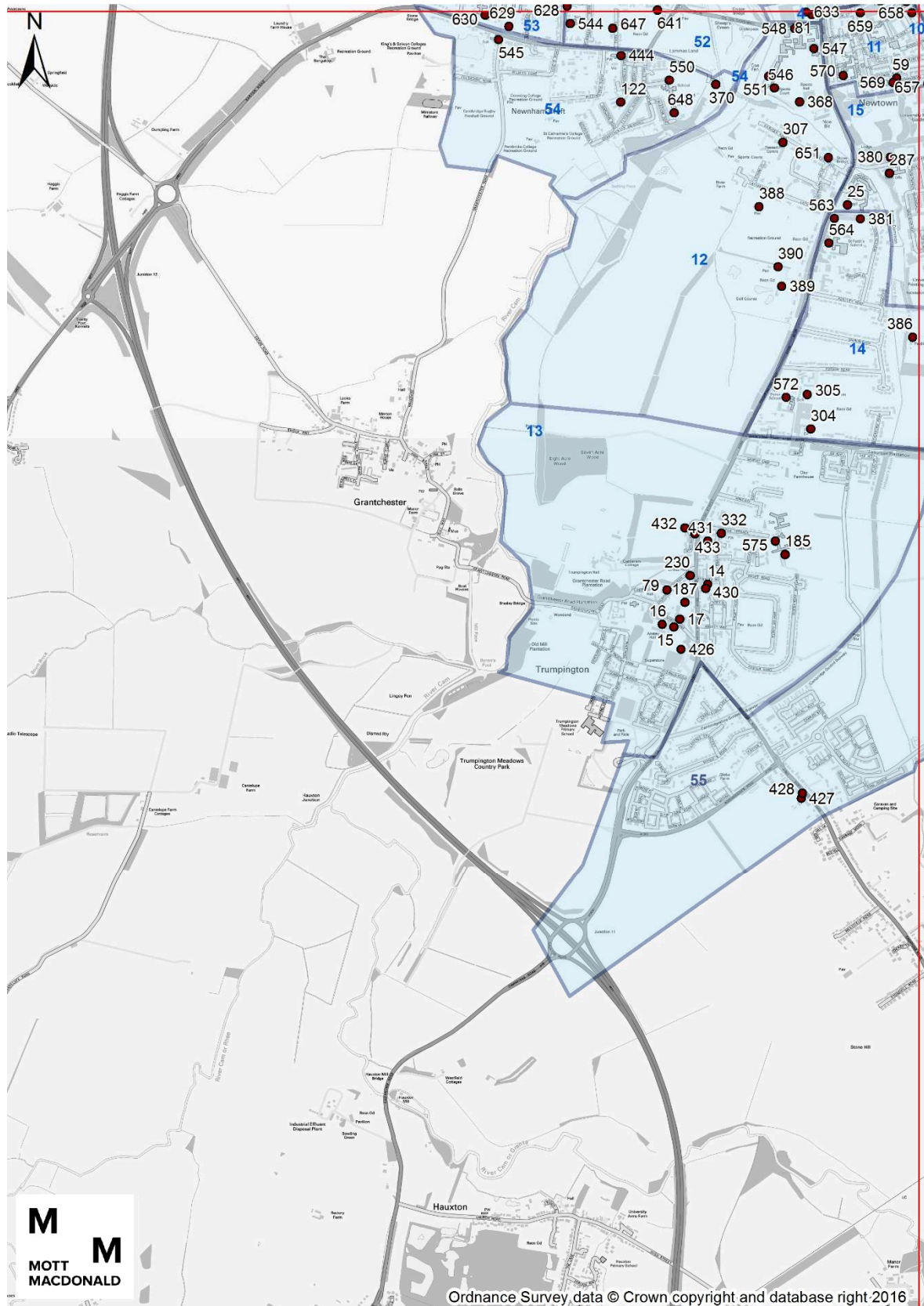
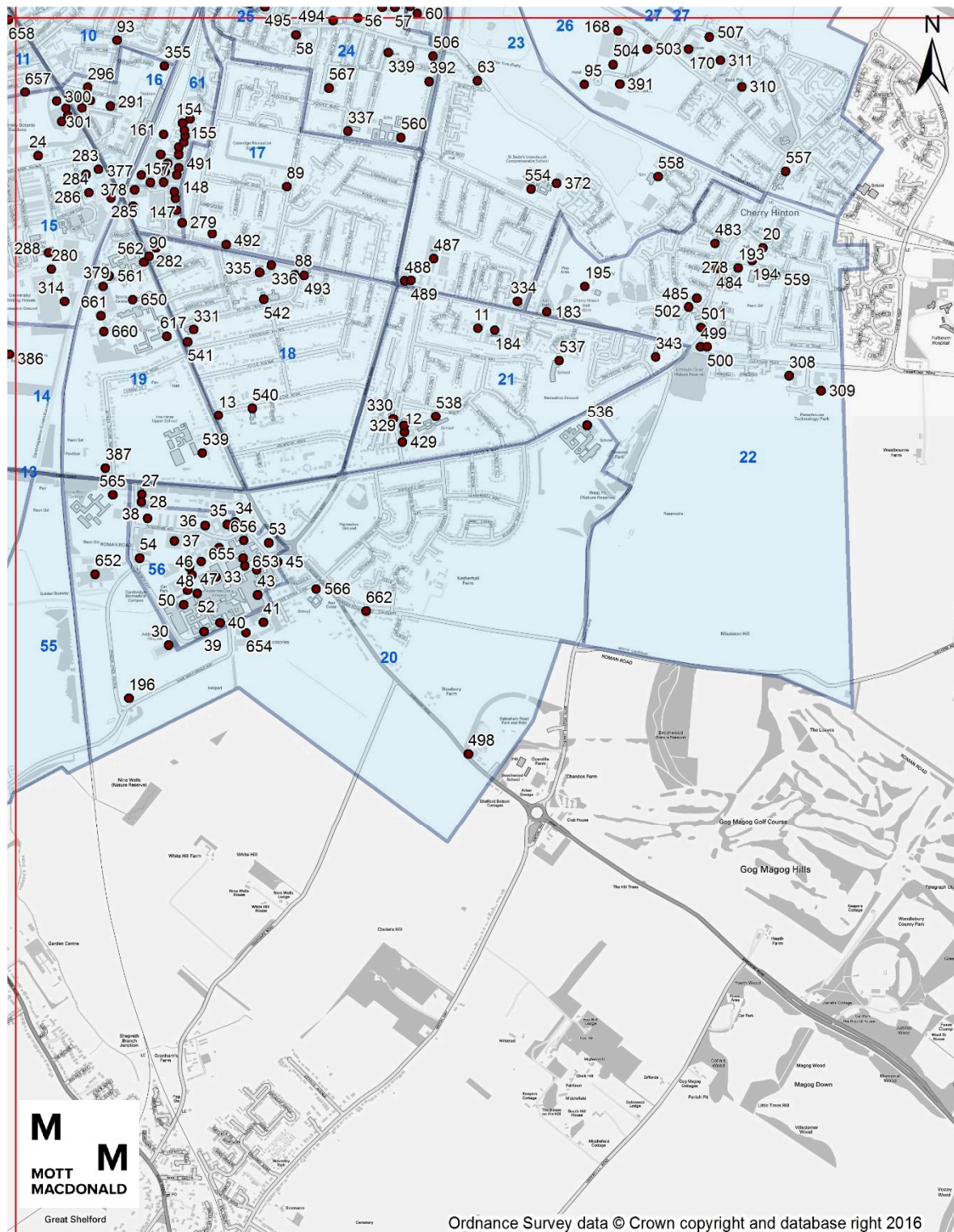
Figure 17: Zone structure and site locations in the survey area's south west quadrant

Figure 18: Zone structure and site locations in the survey area's south west quadrant

Source: 2016 surveys and Buchanan Report

Table 8: Full results per site, grouped and subtotalled by zone

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand													
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked			
2	333	PofWorship	4	4	4							4													
2	345	PofWorship	12	8	12							8													
2	678	University	23	12	23							12													
2	679	University	32	25	32							23													
2	680	University	18	14	18							13													
Zone 2 Subtotal			89	63	73							4							12						
3	246	Office	76	51	73							3							50						
3	621	Industrial	21	10																					
3	622	Industrial	6	3																					
3	623	Industrial	20	10																					
Zone 3 Subtotal			123	74	73							3							50						
4	81	Hotel	38	20	38							20													
4	369	Recreation	10	2	10							2													
4	624	University	34	19	34							19													
4	633	University	33	0	24							9													
4	634	University	24	19	20							3							1						
4	636	University	10	7	10							7													
4	663	University	20	10	20							10													
4	664	University	35	25	35							25													
4	665	University	24	21	23							1							21						
4	666	University	6	5	6							5													
4	667	University	45	5	45							5													
4	668	University	10	9	10							9													
4	669	University	68	49	68							49													
4	670	University	8	5	8							5													
4	671	University	15	8	15							8													
4	672	University	15	10	15							10													
4	673	University	14	13	14							13													
4	674	University	26	12	1							25							0						

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand																				
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked										
4	705	University	5	0	5							0																				
Zone 4 Subtotal			440	239	26	245	91	5			47		26	14	121	70	2			20		12										
5	82	Hotel	151	63	145							62							0		1											
5	637	University	22	11	1	19	2								0	10	1															
5	675	University	3	3	3							3																				
5	676	University	6	5	6							5																				
5	677	University	6	5	4	2							4	1																		
5	683	University	8	8								8																				
5	684	University	4	4								4																				
5	685	University	16	12								16																				
5	686	University	23	23								23																				
5	687	University	8	0								8																				
5	688	University	19	14	18							1																				
5	689	University	29	0	16	12							1		0	0																
5	690	University	5	3	3							2		3							0											
Zone 5 Subtotal			300	151	16	153	58	12	1	1	51		8	0	69	32	2	0	1	44		3										
6	529	School	7	1								7																				
6	607	University	48	47								48																				
6	691	University	6	0								6																				
Zone 6 Subtotal			61	48								54							7		47							1				
7	436	Retail	7	0	7														0													
Zone 7 Subtotal			7	0	7														0													
8	189	Misc	23	9	20							2		1		8							0		1							
8	190	Misc	35	27	32							1									27		0		0							
8	232	Office	51	29								2		46		3		0							28		1					
8	233	Office	5	8	5															5								3				
8	234	Office	18	15	18														15													
8	235	Office	11	6	10	1														6	0											
8	236	Office	7	7	7														7													
8	237	Office	27	20	27														20													
8	238	Industrial	0	0																												

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand												
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked			
8	239	Office	16	6	16								6												
8	240	Office	11	8	9	2								6	2										
8	241	Office	15	9									15								9				
8	242	Industrial	0	0																					
8	243	Office	108	106	108								106												
8	244	Office	7	7	7								6								1				
8	245	Office	10	4	10								4												
8	435	Retail	39	30									39								30				
8	437	Retail	6	4	6								4												
8	439	Retail	22	20	22								20												
8	441	Retail	43	26	43								26												
8	442	Retail	8	7	8								7												
8	543	School	26	16	26																				
Zone 8 Subtotal			539	391	14	276	120	16		3	46	44	20	11	199	82	10		1	28	31	13			
9	18	Health	5	3									5								3				
9	163	Industrial	2	1									2								1				
9	164	Office	9	9									9								9				
9	167	Industrial	10	9	10								9												
9	188	Industrial	10	5																					
9	289	Office	14	9									14								9				
9	440	Retail	12	7									12								7				
9	619	Industrial	25	12																					
Zone 9 Subtotal			87	55	10						2	14	26	9					1	9	19				
10	93	Hotel	4	2									4								2				
10	165	Industrial	28	26	3								1	12		12	1				1	12	12		
10	166	Industrial	2	1	2								1												
10	303	Office	90	52																					
10	340	PofWorship	12	2									12								2				
10	367	Recreation	11	7									11								7				
10	382	Recreation	10	0									10								0				
10	384	Recreation	32	10	2								30								1				9

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand										
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
10	385	Recreation	574	140				15	34		523	2					12	9		119	0	
Zone 10 Subtotal			763	240			2	20	34	1	598	2	16			1	14	9	1	149	0	14
11	59	Health	26	13	13			2			11			7			1			5		
11	297	Office	48	18	6	42							2	16								
11	341	School	17	11		5					12			3						8		
11	342	PofWorship	22	12				3			19						2			10		
11	383	Recreation	12	10				1			11						0			10		
11	569	School	29	25	5								24	7								18
11	570	School	42	0		42									0							
11	657	University	24	19				2			12		10				0			10		9
11	658	University	22	12							22									12		
11	659	University	69	54			61	2		2	4					53	0		1	0		
Zone 11 Subtotal			311	174	24	89	61	10		2	91		34	16	19	53	3		1	55		27
12	307	Office	28	19				1			27						0			19		
12	368	Recreation	59	41	8		2				19	2	28	6		0				17	0	18
12	388	Recreation	22	4				1			21						0			4		
12	389	Recreation	40	26		40									26							
12	390	Recreation	133	43																		
12	546	School	50	20			50									20						
12	547	School	37	25			36	1								25	0					
12	548	School	18	9							18									9		
12	551	School	19	9			9					10				9					0	
12	651	University	10	9									10									9
Zone 12 Subtotal			416	205	8	40	97	3			85	12	38	6	26	54	0			49	0	27
13	14	Health	8	5				3					5				1					4
13	15	Health	10	4		10									4							
13	16	Health	45	23									45									23
13	17	Health	17	9							17									9		
13	79	Hotel	18	4									18									4
13	185	Misc	81	48				3			48		30									
13	187	Misc	185	109	7	2		4			172											

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand									
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other
13	230	Office	26	22		2	23	1							0	22	0				
13	332	PofWorship	10	1									10								1
13	426	Retail	296	123	13			14	11		258			0			3	3		117	
13	430	Retail	16	7				1			15						0			7	
13	431	Retail	43	10				2			41						0			10	
13	432	Retail	50	7	3						47			1						6	
13	433	Retail	12	1							12									1	
13	575	School	25	21			25									21					
Zone 13 Subtotal			842	394	23	14	48	28	11		610		108	1	4	43	4	3		150	32
14	304	Office	55	24	30	21		3					1	15	7		1				1
14	305	Office	210	114	210									114							
14	381	Recreation	12	4																	
14	386	Recreation	44	32								44									32
14	563	School	37	23																	
14	564	School	15	9																	
14	572	School	12	7				1			11										
Zone 14 Subtotal			385	213	240	21		4			11	1	44	129	7		1			1	32
15	22	Health	95	69		6	77	5			7				4	55	4			6	
15	24	Health	8	4							8									4	
15	25	Health	131	125	19		58	1				53		19		54	1				51
15	280	Office	403	291	335			4		28	35	1		256			1		9	25	0
15	283	Office	90	52																	
15	284	Office	46	36			42	4		0						32	2		2		
15	285	Office	157	126			140	17								114	12				
15	286	Office	46	36			42	4		0						32	2		2		
15	287	Office	45	30								45									30
15	288	Office	240	129	170	29		12		29				103	18		3		5		
15	298	Office	128	76			122					6				73					3
15	299	Office	9	8			8	1								8	0				
15	300	Office	85	65			45	3			37					33	2			30	
15	301	Office	41	28							41										28

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand																	
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked								
15	314	Office	285	164																										
15	380	Recreation	40	19									19																	
Zone 15 Subtotal			1849	1257	524	35	534	51		57	128	60	85	378	22	401	27		18	93	54	49								
16	291	Office	55	33									33																	
16	292	Office	66	26	3								1								23									
16	293	Office	50	38	9		2	2			37			7		2	1			28										
16	294	Office	48	28	2								46								28									
16	295	Hotel	22	18									22								18									
16	296	Office	54	20									54								20									
Zone 16 Subtotal			295	163	9		2	7		1	276			7		2	3		1	150										
17	21	Health	23	15									12								11		9		6					
17	89	Hotel	3	1									3											1						
17	492	Retail	8	9									8											7		2				
Zone 17 Subtotal			34	25									23								11				17		8			
18	13	Health	12	3									12												3					
18	88	Hotel	24	3																	24					3				
18	90	Hotel	4	2									4												2					
18	282	Office	13	7			11	2																						
18	331	PofWorship	12	1									1								11			0		1				
18	335	PofWorship	17	7									2										15		0		7			
18	336	PofWorship	9	0																	9						0			
18	493	Retail	9	5									1								8			1		4				
18	540	School	13	11									1								8	4		1		7	3			
18	541	School	4	1																	4					1				
18	542	School	15	12																		15						12		
Zone 18 Subtotal			132	52			11	7			47		67									2		18		25				
19	379	Recreation	31	17									2								29			1		16				
19	387	Recreation	70	0																	70					0				
19	539	School	148	91			3	5		1	139																			
19	561	School	76	72									4								72			3		69				
19	562	School	11	3			9	2																	3	0				

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand										
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
19	617	Industrial	86	42																		
19	650	University	53	34				5			48											
19	660	University	72	44	20	44		6		2				20	24		0		0			
19	661	University	7	4							7											
Zone 19 Subtotal			554	307	20	44	12	24		3	365			20	24	3	4		0	85		
20	27	Health	8	5		6		2							4		1					
20	28	Health	18	16				2				16					1			15		
20	30	Health	1228	1091				70			1158						40			1051		
20	34	Health	18	42							18								17	25		
20	41	Health	109	78	6		4				88	11		6		2			62	8		
20	45	Health	24	24			20						4			20				4		
20	498	Retail	77	44	0	75		2							44		0					
20	536	School	58	56	1			1		2	54			1			0		2	53		
20	565	School	170	123			6		30	134						0		11	112			
20	566	University	48	41							25		23						24	17		
20	652	University	280	144	221		59							122		22						
20	654	University	74	53	4	34		8			18	10		1	27		1		16	8		
20	662	University	39	21				2			36		1				0		21	0		
Zone 20 Subtotal			2151	1738	232	115	89	87	30	136	1397	37	28	130	75	44	43	11	114	1244	31	46
21	11	Health	19	12			16	2				1				10	1			1		
21	12	Health	12	5			11	1								2	3					
21	184	Misc	73	43																		
21	329	PofWorship	22	13				1			21						0			13		
21	330	PofWorship	16	16							16									16		
21	343	PofWorship	64	2				7			57						0			2		
21	429	Retail	8	7								8								7		
21	537	School	41	29				1			26	2	12				0			21	2	6
21	538	School	18	7	1			3			11		3	0			1			6		0
Zone 21 Subtotal			273	134	1		27	15			131	3	23	0		12	5			58	3	13
22	20	Health	13	7				1			12						1			6		
22	183	Misc	48	25				6			42						1			24		

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand										
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
22	193	Recreation	25	2	22			3				2			0							
22	194	Misc	22	19				1	21			0			19							
22	195	Misc	50	20				8	42			0			20							
22	278	Office	16	6				6			10			6			0					
22	308	Office	496	362	475	13	8					351	8	3								
22	309	Office	173	132	169	3				1				130	1	1						
22	483	Retail	30	22							30			22								
22	484	Retail	11	11				11						11								
22	485	Retail	16	16							16			16								
22	499	Retail	34	22							34			22								
22	500	Retail	13	4	2			11			0			4								
22	501	Retail	6	1				6						1								
22	502	Retail	6	2							6			2								
22	559	School	9	8	8	1						7	1									
Zone 22 Subtotal			968	659	652	16	22	30	151			1	96	488	9	2	6	91			1	62
23	63	Health	5	4	5						4											
23	197	Misc	90	53																		
23	334	PofWorship	38	2	2			34			2		0			1		1				
23	487	Industrial	276	37				258			9	9				28	5	4				
23	488	Retail	24	19	2			19			3		0			18		1				
23	489	Retail	12	9	2			8			2				2			7		0		
23	554	School	82	65	39			3	6			34	34			2	1			28		
23	558	School	15	11				15						11								
Zone 23 Subtotal			542	200	44			9	334			17	48	38			4	65			6	34
24	55	Health	9	7	3	1			3			2		3	1			2		1		
24	56	Health	22	16	1			21						0			16					
24	57	Health	119	106	116			3				104			2							
24	58	Health	6	3							6			3								
24	337	PofWorship	4	2							4			2								
24	339	PofWorship	3	1	1						2		0			1						
24	392	Recreation	6	0				4			2		0			0						

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand												
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked		
24	494	Retail	23	19	23							19												
24	495	Retail	16	8	3	7		2				4	2	6		0				0				
24	496	Retail	18	18	17							1	17							1				
24	506	Retail	15	3	15							3												
24	560	School	49	30	3							46												
24	567	School	19	13	3		4	8			4	0		1	8			4						
Zone 24 Subtotal			309	226	6	126		15	137			5	20	5	110		4	65			5	7		
25	60	Health	41	39	2	37		2				2							36	1				
25	61	Health	15	11	3							8	4	0							7	4		
25	62	Health	25	4								25								4				
25	133	Industrial	187	75	185		2				73							2						
25	134	Industrial	8	5								8								5				
25	135	Industrial	19	5	19							5												
25	136	Industrial	26	24	26							24												
25	137	Industrial	40	17	40							17												
25	162	Industrial	20	12								20								12				
25	275	Health	33	25	3							27	3	1							24	0		
25	344	PofWorship	17	15	2							15	1							14				
25	373	Recreation	182	119	8							174	5							114				
25	555	School	15	12	15							12												
Zone 25 Subtotal			628	363	2	222		20	324			60	2	109		10	217			25				
26	95	Hotel	57	30	5							51	1	1							28	1		
26	168	Industrial	60	3								60								3				
26	169	Industrial	12	12	12							12												
26	170	Industrial	21	16	21							16												
26	310	Office	96	11	96							11												
26	311	Office	167	59	157		10				59							0						
26	391	Recreation	197	61	26			4	12	155			3			2	9	47						
26	503	Retail	35	15	4							31	1							14				
26	504	Retail	209	74	13							196	1							73				
26	507	School	12	8	1							3	4	4	1							3	0	4

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand													
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked				
26	557	School	16	9				1			9		6			0		7		2						
Zone 26 Subtotal			882	298	26	96	157	38	12		478	5	70	3	11	59	6	9	200	1	9					
27	120	Industrial	160	78																						
27	125	Industrial	149	82									32117													
27	142	Industrial	117	57																						
27	143	Industrial	40	19																						
27	144	Industrial	50	24																						
27	145	Industrial	9	4																						
27	178	Misc	8	3									83													
27	276	Office	232	190	220	6		6						181	5		2			2						
27	277	Office	40	19		40									19											
27	327	PofWorship	45	29		45									29											
27	328	PofWorship	51	37	1									50	037											
27	365	Recreation	145	26	13	113	2	16				1		0	0	0	16		0	10						
27	366	Recreation	205	35		192		8	2			3			32		1	2		0						
27	376	Recreation	14	4		14									4											
27	393	Recreation	44	20	4									40	317											
27	422	Retail	56	10										56												
27	425	Retail	36	27									36													
27	450	Retail	253	75	615								232	2568												
27	451	Retail	169	40	163								42	3802												
27	452	Retail	51	14	32								46	0014												
27	453	Retail	84	70	32								2		50	24046										
27	478	Retail	20	15										20												
27	479	Retail	36	52	6	30										6	30									
27	480	Retail	15	8		15										8										
27	481	Retail	77	71	75								2	692												
27	482	Retail	77	50	77								50													
27	531	School	38	23	32								2	2		2	22001									
27	556	School	46	24		42		4									24		0							
Zone 27 Subtotal			2267	1107	239	574	304	58	21	2	346	6	341	187	201	153	26	9	0	141	1	206				

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand																					
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked											
28	121	Industrial	24	12																													
28	179	Misc	210	124	210																												
28	180	Industrial	74	36																													
28	181	Misc	118	90	2							0																					
28	182	Misc	120	65	120							65																					
28	228	Office	192	110	191							1																					
28	229	Office	45	2	43							2																					
28	460	Retail	380	177	360							20																					
Zone 28 Subtotal			1163	616	804	120	25	116			0	65	0	90			2																
29	10	Health	36	20	33							3																					
29	78	Hotel	24	9	9							15																					
29	114	Industrial	7	1								7																					
29	115	Industrial	17	4	17							4																					
29	116	Industrial	145	73	21	92	4	7			11	10	17	38	2	5			3	8													
29	117	Industrial	29	29								29																					
29	118	Industrial	15	9								15																					
29	119	Industrial	10	7	10							7																					
29	201	Office	53	28								53																					
29	226	Office	10	3	10							3																					
29	227	Office	126	79	122							2	2			79							0	0									
29	323	PofWorship	15	7								15							7														
29	326	PofWorship	25	5								25							5														
29	423	Retail	29	16	2							27							0							16							
29	424	Retail	23	7								23							7														
Zone 29 Subtotal			564	297	38	276	11	2			82	11	144	21	149	3	0			33	3	88											
30	19	Health	21	11	18							3							11							0							
30	83	Hotel	57	30	6							51							1							29							
30	273	Office	8	5	8							5																					
30	375	Recreation	36	2																						2							
30	473	Retail	824	547	733							54	37			465							51	31			12						
30	474	Retail	39	12								39														12							

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand																																	
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked																								
30	475	Retail	14	8	6								8								0								8																	
30	476	Retail	13	1	13																1																									
30	477	Retail	7	1									7																1																	
Zone 30 Subtotal			1019	617	8	37	733	63	37		90		15	5	12	465	52	31		41		11																								
31	126	Industrial	18	4									18																4																	
31	138	Industrial	21	8	2								19								2								6																	
31	139	Industrial	20	15	1	2									1	16									1	2	0								12											
31	140	Industrial	25	7									1	24									0								7															
31	141	Industrial	29	18	26								3									16								2																
31	192	Misc	69	34									65								4									34								0								
31	274	Office	41	24									38								3									24								0								
31	346	PofWorship	25	0																	25																0									
31	374	Recreation	32	5	3								29																0								5									
31	454	Retail	114	18	1								113																0								18									
31	455	Retail	115	42									115																								42									
31	456	Retail	484	173	24								16	444																11								8	154							
31	467	Retail	5	1	1								4																0								1									
31	468	Retail	65	48	20								11								34	16																9								23
31	469	Retail	29	14									29																								14									
31	470	Retail	8	7	1								7																0								7									
31	471	Retail	12	8									12																								8									
31	472	Retail	11	7									11																								7									
Zone 31 Subtotal			1123	433	1	24	26	34	16	1	822	7	192	1	20	16	13	8	0	306	0	69																								
32	247	Office	168	78	35	15	16								102								35	13	0								30													
32	248	Office	10	7	9								1																6								1									
32	371	Recreation	74	19	6								18								50	1																14								4
32	421	Retail	8	0									8																								0									
Zone 32 Subtotal			260	104	35	24	23								128								50	35	19	2								44								4				
33	77	Hotel	30	8									5								25									0								8								
33	94	Hotel	12	1									12																								1									
33	306	Health	10	5									10																								5									

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
33	530	School	6	1															6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										</

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand													
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked			
38	253	Office	158	102				2				156				2				100					
38	254	Office	97	89	80	12			4				1	80	7			2				0			
38	255	Office	92	53	87	3		2								49	3		1						
38	256	Office	640	326	134	8			11				487	0	8			3				315			
38	257	Office	468	304				442	21	1		4				290		4	1		4	5			
38	258	Office	296	331	286					5	5					286		3		3		39			
38	462	Retail	18	10								18													
38	463	Retail	68	44											68										
Zone 38 Subtotal			2670	1502	1114	46	445	58	9		795	15	188	561	33	293	15	5		483	10	102			
39	1	Health	17	14				15	2								13		1						
39	5	Health	6	4											6								4		
39	70	Hotel	7	0	3							4		0								0			
39	71	Hotel	7	7	7									7											
39	99	Industrial	11	9				10	1								9		0						
39	100	Industrial	57	41				51	6								39		2						
39	173	Misc	14	11	1				2	11			1					9							
39	198	Misc	8	2				8								2									
39	319	PofWorship	20	5				20								5									
39	320	PofWorship	18	6								18										6			
39	358	Recreation	15	10							13	2							8	2					
39	394	Retail	11	8				1	10					1					7						
39	397	Retail	55	2								55										2			
39	398	Retail	12	10	11		1									9		1							
39	399	Retail	11	1				10	1								1		0						
39	401	Retail	23	6				2	21					0					6						
39	409	Retail	40	9				38	2						9		0								
39	459	Retail	150	88	147			3									87		1						
39	509	School	58	28	45	12	1									16	12	0							
39	510	School	30	25	29			1									25		0						
39	511	School	94	54				61	3	10			20		43		2		6		3				
39	512	School	29	17	5	17	2					5			2	12	0					1	2		

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand											
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	
39	574	School	50	26		48			2						26				0				
Zone 39 Subtotal			743	383	230	95	205	38			65	5	105	131	66	119	11			36	1	19	
40	72	Hotel	6	3									6										3
40	176	Misc	20	8		16						4		7							1		
40	321	PofWorship	31	15				4			27						1			14			
40	408	Retail	6	4									6										4
40	410	Retail	2	2									2										2
40	411	Retail	10	4									10										4
40	412	Retail	14	5		14								5									
40	518	School	28	27		23		1				4		23			0				2		2
40	519	School	30	10									30										10
40	520	School	36	26				2			34						1			25			
40	521	School	54	48		48		2			4			46			1			1			
40	522	School	7	6									7										6
Zone 40 Subtotal			244	158		101		9			65	8	61	81		3			40	3	31		
41	315	Retail	62	20	2			5			55			0			1			19			
41	316	PofWorship	18	0				2					16				0						0
41	317	PofWorship	6	2				6									2						
41	318	PofWorship	20	6			20									6							
41	395	Retail	94	76			84	10								70	6						
41	396	Retail	20	13			20									13							
41	407	Retail	14	5									14										5
Zone 41 Subtotal			234	122	2		124	23			55		30	0		89	9			19		5	
42	175	Retail	14	5							9		5							3			2
42	177	Misc	7	3				7									3						
42	361	Retail	51	23							51									23			
42	405	Retail	10	9							10									9			
42	406	Retail	7	3									7										3
42	515	School	32	17		28		4						14			3						
Zone 42 Subtotal			121	60		28		11			70		12	14		6			35		5		
43	76	Hotel	13	12				2			11						0			12			

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand																																	
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked																							
43	219	Office	39	11								39								11																									
43	221	Office	53	29	53								29																																
43	325	PofWorship	49	37		13	25	4			7																																		
43	419	Retail	8	6				1	1		6																																		
43	516	School	45	45	42				2		1								36				0		0				9																
43	517	School	85	51	45	38				2								34	17				0																						
Zone 43 Subtotal			292	191	140	51	25	11	1	1	24		39	99	26	21	1	1	0	23				20																					
44	75	Hotel	63	21								63															21																		
44	217	Office	28	16								2								26								0								16									
44	218	Office	79	46																79															42	4									
44	220	Office	30	15		28				2								10				0								5															
44	222	Office	4	2		4															2																								
44	312	Office	11	9	2				1		8								2				1								6														
44	313	Office	18	14								1								17								1								13									
Zone 44 Subtotal			233	123	2	32				6				193	2	12				2				98	9																				
45	208	Office	12	8								12															8																		
45	209	Office	9	8								9															8																		
45	210	Office	255	189								10	245															4	185																
45	211	Office	37	32	27				10								27				5																								
45	213	Office	17	13		2				2								13								0				0								13							
45	214	Office	54	51								1								53															0								51		
45	215	Office	5	0								4								1															0								0		
45	216	Office	59	39								2								41	16															0								39	0
45	324	PofWorship	21	14																21																						14			
45	416	Retail	5	4															5																						4				
45	602	University	29	13	10				1								18	6				0															7								
45	603	University	15	10																																									
45	604	University	64	53	12				2								50	8				1															44								
45	606	University	22	14		22																																							
Zone 45 Subtotal			604	447	49	24				22	10	444	22	18	41	0				6				4	362	4	7																		
46	112	Industrial	14	7								14																						7											

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand										
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
46	113	Industrial	28	0	28							0										
46	403	Retail	45	39	5337							1335										
46	404	Retail	56	13	56							13										
46	415	Retail	7	1	7							1										
46	528	PofWorship	7	5	16							05										
Zone 46 Subtotal			157	65	6313513							13556										
47	4	Health	8	8	8							8										
47	359	Recreation	15	0	15							0										
47	402	Retail	33	20	2211							1010										
47	514	School	17	13	15	2							13	0								
Zone 47 Subtotal			73	41	15		2		22			34		13		0		1018				
48	111	Industrial	85	72	71212							60012										
Zone 48 Subtotal			85	72	71212							60012										
49	64	Health	25	18	25							18										
49	68	Hotel	67	12	4594							1110										
49	74	Hotel	80	76	36116							06115										
49	205	Office	18	21	2	16					2		136									
49	206	Office	18	18	18							18										
49	207	Office	31	24	31							24										
49	212	Office	140	77	10	7	123					5	6	66								
49	591	University	69	54	366							054										
49	592	University	31	21	1264							01542										
49	593	University	192	157	40	67	74	2	9			37	60	31	1	820						
49	594	University	116	105	964412							893211										
49	595	University	66	44	5826							4310										
49	600	University	52	41	4624							3803										
49	601	University	70	28	268							0262										
49 Sum			975	696	50	76	228	21	10		505	6	79	42	68	163	6	2		316	4	95
50	202	Office	81	99	7326							691524										
50	203	Office	7	6	7							6										
50	204	Office	38	34	38							34										

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand																					
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked												
50	526	School	18	15									18									15												
50	527	School	6	4									6									4												
50	576	University	60	44	56		1		3										41	0		3												
50	577	University	15	14	14		1										13	1																
50	579	University	108	83	108								83																					
50	580	University	101	73	97		2		2										71	0		2												
50	581	University	138	30	126		8		4										29	1		0												
50	582	University	71	27	65		4		2										27	0		0												
50	583	University	73	41	73																41													
50	584	University	78	48	75		3										48	0																
50	585	University	108	62	103		5										62	0																
50	586	University	23	8	22		1										8	0																
50	587	University	80	65	79		1										57	1		7														
50	588	University	164	68	164																68													
50	589	University	42	28	22						20										8				19	1								
50	590	University	41	20				4		7		26		4										1	0	15	4							
50	596	University	11	8	11																8													
50	597	University	82	47	82																47													
50	598	University	12	10	8		4										7	3																
50	599	University	295	183	280		15										182	1																
50	613	University	9	9	9											9																		
50	706	University	10	3				2					8										0				3							
Zone 50 Subtotal			1671	1029	201	1162	104	53	7	11	59	4	70	138	654	86	9	0	5	45	4	88												
51	96	Hotel	59	41	47											2		10										36			1	4		
51	532	School	20	19									20																		19			
51	534	School	10	4	10																4													
51	535	School	94	62	20	71		1					2										11	48		1		2						
51	573	School	20	19									20													19								
51	609	University	17	11	1											16																		
51	610	University	15	10	15																													
51	611	University	86	44	85		1																		44	0								

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand										
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
51	614	University	6	1								6								1		
51	693	University	154	139	84	63		6		1			56	58		0		0			25	
51	694	University	10	9								10								9		
51	695	University	35	32								35								32		
51	696	University	10	5	10							5										
51	697	University	90	67								90								67		
51	698	University	20	5	18			1		1			5			0		0				
Zone 51 Subtotal			646	467	104	201	119	9		2	125	24	62	67	116	84	1		0	99	22	58
52	443	Retail	21	1	1	1		1			1	1	16	0	0		0		0	0	1	
52	544	School	5	5								5								5		
52	549	School	15	10								15								10		
52	616	University	14	14	8								6	8						6		
52	625	University	23	16								23								16		
52	626	University	6	4	1							5										
52	627	University	17	11	8								9									
52	628	University	13	8								13										
52	638	University	22	19								22								19		
52	639	University	28	0								28								0		
52	640	University	8	7								8								7		
52	641	University	8	5								8								5		
52	642	University	35	27				34	1					27		0						
52	643	University	27	22								27								22		
52	646	University	52	22	2							50		1							45	
52	647	University	21	21								21								21		
52	699	University	15	9								15								9		
52	700	University	14	12	14								11							1		
52	701	University	7	4	6				1					4	0							
52	702	University	27	19	1								11	15	0		9			10		
52	703	University	7	7								7								7		
52	704	University	5	6	5								5							1		
Zone 52 Subtotal			390	249	35	9	34	6			174	10	122	20	8	27	1			118	0	76

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand						
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child
53	615	University	40	18	40							18						
53	629	University	84	51	14							50						
53	630	University	26	17	23							16						
53	631	University	4	0	4							0						
53	632	University	9	0	8							0						
Zone 53 Subtotal			163	86	8							84						
54	122	Industrial	30	23	30							23						
54	370	Recreation	65	56	60							56						
54	444	Retail	12	2	12							2						
54	545	School	4	3	4							3						
54	550	School	10	7	10							7						
Zone 54 Subtotal			121	91	60							23						
55	427	Retail	8	4	7							4						
55	428	Retail	4	0	4							0						
Zone 55 Subtotal			12	4	7							0						
56	29	Health	1058	823	64							805						
56	33	Health	22	22	14							8						
56	35	Health	57	47	2							47						
56	36	Health	42	29	42							29						
56	37	Health	1266	1175	55							1151						
56	38	Health	272	156	272							156						
56	39	Health	10	2	10							2						
56	40	Health	5	4	5							4						
56	43	Health	18	18	6							3						
56	44	Health	24	23	17							7						
56	46	Health	20	18	20							18						
56	47	Health	16	9	7							3						
56	48	Health	15	3	9							3						
56	52	Health	5	5	4							1						
56	53	Health	170	75	157							72						
56	54	Health	6	0	6							0						

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand																													
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked																				
56	653	University	38	23	24							12		2		16							5		2																	
56	655	University	5	5	4	1							4		1																											
56	656	University	17	17	10	3							4				3							4																		
Zone 56 Subtotal			3066	2454	14	272	257	131	5	11	2337	16	23	14	156	159	43	3	11	2042	9	17																				
58	259	Office	203	54	188							1		12		2		52							0		2		0													
58	260	Office	202	57	51	3	1							133		14		0		0		0		57							0											
58	261	Office	318	102	75	7								2		231		3		0		1		0							101		0									
58	262	Office	323	265	233	22	2							15		51		191		38		0		6							30											
58	263	Office	239	188	1							4		234				0		1		187																				
58	264	Office	504	300	18							6		2		473		5		10		1		3							281		5									
58	265	Office	105	30	8							1		96				0		0		30																				
58	266	Office	111	80	2							109				0		80																								
58	267	Office	257	30	130	2							3		116		1		5		0		0							30		0		0								
58	268	Office	701	286	216	10							5		12		334		124		0		9							2		3							272		0	
58	269	Office	370	0	302	14									54		0		0									0														
58	270	Office	789	585	17							8		1		759		4		3		3							1		573		1		4							
58	271	Office	859	443	18							14		2		824		1		5		1							2		434							1				
58	272	Office	395	218	178	16	33	4								144		20		134		10		9		0		54							11							
58	552	School	1018	617	8	18	14							6		939		33		8		4		5							6		576		18							
58	553	School	517	218	3								1		501		12		3									1		214		0										
Zone 58 Subtotal			6911	3473	1196	289	70	77	2	43	4893	88	253	336	113	28	13	2	20	2889	38	34																				
59	65	Hotel	130	12	10	112	8											0		12		0																				
59	66	Hotel	96	8	89							7						5		3																						
59	67	Hotel	24	0	24													0																								
59	172	Misc	11	10	9							2						9		1																						
59	357	Recreation	21	0	2							19						0		0																						
59	508	School	31	25	30	1											24		1																							
Zone 59 Subtotal			313	55	40	234	20							19		24	26	5							0																	
60	505	Retail	424	152	374							25		24		1		136							12		4		0													
Zone 60 Subtotal			424	152	374							25		24		1		136							12		4		0													
61	87	Hotel	50	19	14							36		1							18																					

Zone	Site No	Landuse	Capacity	Demand	Capacity							Demand											
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	
61	146	Industrial	27	18	27							18											
61	147	Industrial	30	4	7		1		22					4		0		0					
61	148	Industrial	14	8	14							8											
61	149	Industrial	6	3								6							3				
61	150	Industrial	6	2								6							2				
61	151	Industrial	4	2								4							2				
61	152	Industrial	4	2								4							2				
61	153	Industrial	6	3								6							3				
61	154	Industrial	7	4	2								5							2			
61	155	Industrial	6	12								6							12				
61	156	Industrial	21	16								9		12		9			7				
61	157	Industrial	12	8								12							8				
61	158	Industrial	5	1								5							1				
61	159	Industrial	4	2								4							2				
61	160	Industrial	167	111			165		2							109		2					
61	161	Industrial	14	7			4				10							0		7			
61	279	Office	114	62			113		1							61		1					
61	378	Recreation	7	8								7							7		1		
61	490	Retail	13	6			1				12							0		6			
61	491	Retail	11	11								11							8		3		
Zone 61 Subtotal			1154	491	2	7	278	49			769	49	2	4	170	5			273	37			
62	103	Industrial	53	50	24	29									24	26							
62	104	Industrial	28	9	28									9									
62	105	Industrial	159	86	141	5		3							10	83	1	2		0			
62	106	Industrial	63	22			1				41		21							19	3		
62	107	Office	13	5	11		1				1							3	1		1		
62	108	Industrial	7	5	2									5							2	3	
62	109	Industrial	20	24	20														17		7		
62	110	Industrial	156	66	11	9		1				109	26		9	9	0		48	0			
Zone 62 Subtotal			499	267	176	104	6				155	27	31	116	67	3		70		1	10		
63	2	Health	42	41	9			2				30	1		9			2	30	0			

Zone	Site No	Landuse	Capacity	Demand	Capacity								Demand									
					Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked	Staff	Visitor	Mixed	Disabled Only	Parent & Child	Motor cycle	Type Unknown	Other	Not Marked
63	3	Health	12	5							12									5		
63	174	Misc	24	5				2			7	1	14				0			2	0	3
63	400	Retail	7	2							4		3							0		2
63	513	School	55	38		51		2		2				38			0		0			
63	525	School	5	2		5								2								
Zone 63 Subtotal			145	93	9	56		6		2	53	2	17	9	40		2		0	37	0	5
64	364	Recreation	8	3									8									3
Zone 64 Subtotal			8	3									8									3
65	84	Hotel	8	1									8									1
65	123	Industrial	41	29		33		6					2	23			6					0
65	124	Industrial	136	110				128	8								107	3				
65	445	Retail	15	5				1			14						0			5		
65	446	Retail	20	0							20									0		
65	447	Retail	187	60				11	2		174						3	1		56		
65	448	Retail	288	85				261	25			2					78	7			0	
65	449	Retail	15	12				13	1			1					11	0			1	
65	464	Retail	77	4							77									4		
65	465	Retail	97	46				6			91						0			46		
65	466	Retail	61	35				4			57						3			32		
Zone 65 Subtotal			945	387		33	402	62	2		433	3	10	23	196	22	1		143	1	1	
66	605	Industrial	25	12																		
66	681	Industrial	10	5																		
66	682	University	3	2							3									2		
Zone 66 Subtotal			38	19							3									2		
Grand Total			41962	23989	5500	5644	5999	1261	206	315	18038	459	2987	3068	2508	3642	415	94	186	10681	244	1576

Source: 2016 survey results

B. PNR Capacity Results

B.1 PNR Capacity Results by Zone

Table 9: Total measured 2016 PNR capacity by zone and comparison with previous survey result

Zone	Total Capacity (spaces)		Change	
	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
1	0	25	-25	-100.0%
2	89	268	-179	-66.8%
3	123	337	-214	-63.5%
4	440	1157	-717	-62.0%
5	300	447	-147	-32.9%
6	61	189	-128	-67.7%
7	7	204	-197	-96.6%
8	488	1040	-552	-53.1%
9	87	876	-789	-90.1%
10	763	891	-128	-14.4%
11	311	816	-505	-61.9%
12	416	160	256	+160.0%
13	842	664	178	+26.8%
14	385	467	-82	-17.6%
15	1849	2027	-178	-8.8%
16	295	1888	-1593	-84.4%
17	34	314	-280	-89.2%
18	132	386	-254	-65.8%
19	554	511	43	+8.4%
20	2151	290	1861	+641.7%
21	273	468	-195	-41.7%
22	968	676	292	+43.2%
23	542	532	10	+1.9%
24	309	569	-260	-45.7%
25	628	791	-163	-20.6%
26	882	605	277	+45.8%
27	2267	789	1478	+187.3%
28	1163	930	233	+25.1%
29	564	833	-269	-32.3%
30	1019	1331	-312	-23.4%
31	1123	1064	59	+5.5%
32	260	472	-212	-44.9%
33	58	126	-68	-54.0%
34	17	70	-53	-75.7%

Zone	Total Capacity (spaces)		Change	
35	22	516	-494	-95.7%
36	144	406	-262	-64.5%
37	85	302	-217	-71.9%
38	2670	955	1715	+179.6%
39	743	823	-80	-9.7%
40	244	208	36	+17.3%
41	234	296	-62	-20.9%
42	121	190	-69	-36.3%
43	292	556	-264	-47.5%
44	233	402	-169	-42.0%
45	604	1007	-403	-40.0%
46	157	143	14	+9.8%
47	73	110	-37	-33.6%
48	85	284	-199	-70.1%
49	975	957	18	+1.9%
50	1671	1211	460	+38.0%
51	646	575	71	+12.3%
52	390	587	-197	-33.6%
53	163	320	-157	-49.1%
54	121	175	-54	-30.9%
55	12	36	-24	-66.7%
56	3066	2021	1045	+51.7%
58	6911	2514	4397	+174.9%
59	313	28	285	+1017.9%
60	424	580	-156	-26.9%
61	528	1217	-689	-56.6%
62	499	321	178	+55.5%
63	145	29	116	+400.0%
64	8	31	-23	-74.2%
65	945	1076	-131	-12.2%
66	38	206	-168	-81.6%
67	0	128	-128	-100.0%

Source: 2016 surveys and Buchanan Report

C. PNR Demand Results

C.1 PNR Demand Results by Zone

Table 10: Total measured 2016 PNR capacity by zone and comparison with previous survey result

Zone	Total Demand (spaces)		Change	
	2016 Survey Result	1989/90 Survey	Absolute Change	% Change
1	0	23	-23	-100.0%
2	63	242	-179	-74.0%
3	74	246	-172	-70.0%
4	239	1020	-781	-76.6%
5	151	327	-176	-53.8%
6	48	164	-116	-70.7%
7	0	174	-174	-100.0%
8	364	708	-344	-48.6%
9	55	792	-737	-93.0%
10	240	581	-341	-58.7%
11	174	565	-391	-69.2%
12	205	95	110	115.6%
13	394	393	1	+0.3%
14	213	337	-124	-36.7%
15	1257	1384	-127	-9.1%
16	163	1586	-1423	-89.7%
17	25	199	-174	-87.4%
18	52	167	-115	-68.6%
19	307	427	-120	-28.1%
20	1738	266	1472	+553.4%
21	134	140	-6	-4.2%
22	659	306	353	+115.4%
23	200	251	-51	-20.3%
24	226	296	-70	-23.6%
25	363	442	-79	-17.9%
26	298	346	-48	-13.9%
27	1107	474	633	+133.6%
28	616	876	-260	-29.6%
29	297	605	-308	-50.9%
30	617	799	-182	-22.8%
31	433	574	-141	-24.6%
32	104	411	-307	-74.7%
33	15	50	-35	-70.0%
34	10	29	-19	-65.5%

Zone	Total Demand (spaces)		Change	
35	18	404	-386	-95.5%
36	94	299	-205	-68.6%
37	34	187	-153	-81.8%
38	1502	528	974	+184.5%
39	383	484	-101	-20.9%
40	158	90	68	+75.6%
41	122	101	21	+20.8%
42	60	106	-46	-43.4%
43	191	362	-171	-47.2%
44	123	303	-180	-59.4%
45	447	770	-323	-41.9%
46	65	80	-15	-18.8%
47	41	57	-16	-28.1%
48	72	169	-97	-57.4%
49	696	509	187	+36.7%
50	1029	719	310	+43.1%
51	467	469	-2	-0.4%
52	249	410	-161	-39.3%
53	86	198	-112	-56.6%
54	91	110	-19	-17.3%
55	4	14	-10	-71.4%
56	2454	2134	320	+15.0%
58	3473	1696	1777	+104.8%
59	55	16	39	+243.8%
60	152	224	-72	-32.1%
61	309	789	-480	-60.8%
62	267	240	27	+11.3%
63	93	17	76	+447.1%
64	3	5	-2	-40.0%
65	387	621	-234	-37.7%
66	19	148	-129	-87.1%
67	0	93	-93	-100.0%

Source: 2016 surveys and Buchanan Report

D. PNR Utilisation Results

D.1 PNR Utilisation Results by Zone

Table 11: Total measured 2016 PNR utilisation by zone and comparison with previous survey result

Zone	Total Utilisation (demand/capacity)		Absolute Change
	2016 Survey Result	1989/90 Survey	
1		92.0%	-92.0%
2	70.8%	90.3%	-19.5%
3	60.1%	73.0%	-12.9%
4	54.3%	88.2%	-33.8%
5	50.3%	73.2%	-22.8%
6	78.7%	86.8%	-8.1%
7	0.0%	85.3%	-85.3%
8	74.6%	68.1%	+6.5%
9	63.3%	90.4%	-27.1%
10	31.4%	65.2%	-33.8%
11	55.9%	69.2%	-13.3%
12	49.2%	59.4%	-10.1%
13	46.8%	59.2%	-12.4%
14	55.4%	72.2%	-16.8%
15	68.0%	68.3%	-0.3%
16	55.3%	84.0%	-28.8%
17	73.5%	63.4%	+10.2%
18	39.8%	43.3%	-3.5%
19	55.4%	83.6%	-28.1%
20	80.8%	91.7%	-10.9%
21	49.1%	29.9%	+19.2%
22	68.1%	45.3%	+22.8%
23	36.9%	47.2%	-10.2%
24	73.2%	52.0%	+21.2%
25	57.8%	55.9%	+1.9%
26	33.8%	57.2%	-23.4%
27	48.8%	60.1%	-11.2%
28	53.0%	94.2%	-41.2%
29	52.7%	72.6%	-20.0%
30	60.5%	60.0%	+0.5%
31	38.6%	53.9%	-15.4%
32	40.0%	87.1%	-47.1%
33	25.9%	39.7%	-13.8%
34	58.8%	41.4%	+17.4%

Zone	Total Utilisation (demand/capacity)		Absolute Change
35	81.8%	78.3%	+3.5%
36	65.3%	73.6%	-8.4%
37	40.0%	61.9%	-21.9%
38	56.3%	55.3%	+1.0%
39	51.5%	58.8%	-7.3%
40	64.8%	43.3%	+21.5%
41	52.1%	34.1%	+18.0%
42	49.6%	55.8%	-6.2%
43	65.4%	65.1%	+0.3%
44	52.8%	75.4%	-22.6%
45	74.1%	76.5%	-2.4%
46	41.4%	55.9%	-14.5%
47	56.2%	51.8%	+4.3%
48	84.7%	59.5%	+25.2%
49	71.4%	53.2%	+18.2%
50	61.6%	59.4%	+2.2%
51	72.3%	81.6%	-9.2%
52	63.8%	69.8%	-6.0%
53	52.8%	61.9%	-9.1%
54	75.2%	62.9%	+12.3%
55	33.3%	38.9%	-5.6%
56	80.0%	105.6%	-25.6%
58	50.3%	67.5%	-17.2%
59	17.6%	57.1%	-39.6%
60	35.8%	38.6%	-2.8%
61	58.5%	64.8%	-6.3%
62	53.5%	74.8%	-21.3%
63	64.1%	58.6%	+5.5%
64	37.5%	16.1%	+21.4%
65	41.0%	57.7%	-16.8%
66	50.2%	71.8%	-21.7%
67		72.7%	-72.7%

Source: 2016 surveys and Buchanan Report